

Finance for the Future

# Green quantitative easing:

Paying for the economy we need



Richard Murphy and Colin Hines

# Green Bricks in the Wall: Making Quantitative Easing Green

In March 2009 the Bank of England began a programme of quantitative easing in the UK. As this report notes, there are complicated ways of explaining the programme or an easy one. That easy summary is that, in effect, the Bank of England granted the Treasury an overdraft but to keep the European Union happy had to do so by buying Government gilts issued by the Treasury from UK commercial banks, pension funds and other financial institutions.

There were three reasons for doing this:

1. To keep interest rates low;
2. To provide banks with the money they needed to lend to business and others to keep the economy going.
3. To make sure there was enough money in the economy to prevent deflation happening

No one was sure whether quantitative easing would work, and as we note, no one is sure for certain whether it has worked. We do however suggest in this report that several things did happen:

1. The banks profited enormously from the programme, which is why they bounced back into profit so soon after the crash – and bankers' bonuses never went away;
2. The entire government deficit in 2009/10 of £155 billion was basically paid for by the quantitative easing programme. If you wanted to know how the government met its costs, now you do;
3. There was a shortage of gilts available for investment purposes as a result of the Bank of England buying so many in the market. Large quantities of funds were invested instead in other financial assets including the stock market and commodities such as food stuffs and metals. The USA also undertook quantitative easing at the same time as the UK, which meant that despite near recessionary conditions commodity prices for coffee and basic metals such as copper have risen enormously. This has impacted on inflation, which has stayed above the Bank of England target rate;
4. Deflation has been avoided, although the relative role of quantitative easing in this versus the previous government's reflation policies is unclear;
5. Interest rates have remained low.

However, one thing has not happened, and that is that the funds made available have not resulted in new bank lending. In fact bank lending has declined almost steadily since the quantitative easing programme began<sup>1</sup>.

The quantitative easing programme might be considered a short term success, but as we note, the benefit has been captured almost entirely by the financial services sector whilst further asset boom and bust cycles are, at least potentially being recreated with resultant risk to the economy. These are undesirable long run outcomes when the real aim is to get the UK economy working again. For that reason we cannot support a further round of quantitative easing in the form used in 2009.

The need to reflate the UK economy has not gone away though: there is an urgent need for action to stimulate the economy by investing in the new jobs, infrastructure, products and services we need in this country and there is no sign that this will happen without government intervention. For that reason we propose a new round of quantitative easing – or Green QE2 as we call it.

Green QE2 would do three things, First it would deliver the Green New Deal – the innovative programme for investment in the new economy the UK needs as outlined by the Green New Deal group in its reports for the New Economics Foundation. This would require three actions:

- a. The government would need to invest directly in new infrastructure for the UK.
- b. The government needs to invest in the UK economy, in conjunction with the private sector, working through a new National Investment Bank;
- c. The government must liberate local authorities to partner with the private sector to green their local economies for the benefit of their own communities, and it can do this by providing a capital fund for them to use in the form of equity that bears the residual risks in such projects.

These proposals will together inject money into the UK economy that can kick start economic activity in this country, reinvigorating government, local government, the private sector and household economies and in the process deliver a Green New Deal.

We also make one further recommendation. The first round of quantitative easing bought back debt in the form of gilts. That had unfortunate consequences, but there is one form of government debt that could be bought back with untold benefit for the UK economy resulting from its cancellation – and that is the debt due under £56 billion of PFI schemes. We recommend that the Green QE2 be used to cancel this debt immediately and to pay off the money owed and so rid future generations of taxpayers of the need to have to pay for the past mistakes in government finances. The sums involved are estimated over the decades to total a staggering eventual cost of £252 billion. The around £200 billion ‘saved’ could then at least in part be allocated instead to continue to finance Green New Deal initiatives over the decades to come. There would be no further PFI projects as building and infrastructure programmes would in future be financed through the National Investment Bank.



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Together these programmes provide liquidity and jobs for the UK economy – the combination that is needed now. And as we explain, both will be self financing. This is building the new economy on the back of Green QE2 – an environmentally sustainable, integrated economic, industrial and financing policy for the UK.

## Part 1

# What quantitative easing is, and how the banks have benefited

There are two ways to explain quantitative easing. One is the hard way. The Financial Times has done that, and we have used their explanation in an appendix to this report. The other is the easy way. And that's very easy indeed. Quantitative easing is, when all is said and done, the Bank of England granting the Treasury an overdraft.

There is, however, a problem in the Bank of England doing that: under the European Union's Maastricht Treaty it is illegal for the Bank of England to lend money to the Treasury<sup>ii</sup>, even when the government wants to do it. So the truth is that quantitative easing simply disguises what is actually going on in a rather complicated fashion.

That fashion works like this. First, the Bank of England has been issuing bonds to High Street and investment banks, which they buy. These bonds are called gilts in the technical language of the markets, and that term will be used in this report. Those bonds pay for the government's debt. But because the Bank of England does not want to take money away from the banks for reasons explained below, the Bank of England then buys back gilts from those same High Street and investment banks that have bought the gilts issued by the Treasury.

In principle this looks like a simple in and out operation for the High Street and investment banks, and so it would be if the gilts bought by the Bank of England were those that had just been issued by the Treasury. However, nothing is quite as simple as that in this world. The reality is that, as far as anyone knows, and Bank of England have been a little cagey about this, the gilts they have been buying are not the same as the ones that the Treasury is selling at the same point in time. This complicates things quite a lot, and also explains why the High Street and investment banks are so keen to be part of this process.

That explanation, just like almost everything else in this report, revolves around money, and in this case how the High Street and investment banks can make money out of the Treasury. The technical explanation of this process is in Appendix 2 to this report. Suffice to say here that because the Bank of England has pushed interest rates on gilts to their lowest level for many decades they have, as a direct consequence, pushed gilt prices to record highs. That means that the banks and pension funds that have sold government gilts to the Bank of England as part of the quantitative easing programme have made profits since they would have bought these gilts previously at a lower price.

How much profit as being made in this way is hard to guess. It would be of enormous benefit to know. What we suspect is that a significant part of the £200 billion of spending on QE was turned, almost immediately into profit by UK based banks and we in turn suggest that it was this fact, and little else that restored bank profitability and bank bonuses in 2009.

Some would argue that this may have achieved a positive result: the banks are more liquid as a result and that was one of the planned outcomes of quantitative easing. We, however, do not agree, as is noted below.

## Does anyone know what quantitative easing achieved?

Debate rages about what quantitative easing achieved. The precise answer is that no one knows. As Alistair Darling, who was Chancellor of the Exchequer at the time that the programme was undertaken has said<sup>iii</sup>:

*It (QE) was one of the many measures to get confidence back in the system.*

*Nobody really knows what impact it's having. Look at the Bank of England (monetary policy committee)minutes, even they are split....*

*£200bn of QE was the right time to take stock...*

*[We were] concerned about profiteering....*

*Were I still Chancellor and the Bank came to see me again then I would want to see some assessment of what has happened. In the current climate I can't see any problem with it being a public report.*

*[The question is ] where is this money? We need a Treasury/Bank of England evaluation as to where it is. Is it in circulation, or is it sitting in bank vaults?*

If the former Chancellor of the Exchequer does not know these answers to questions about the programme he permitted it could be argued that any suggestion about the outcome of the quantitative easing programme is pure speculation. To some extent, we have to agree. That, however, takes us no further forward, so we offer some more concrete explanations in the sections that follow.

## Outcome 1: Recapitalising the banks

If our suggestion that the banks made considerable profit as a consequence of quantitative easing is right, then it can be argued that had a significant benefit. During 2008 the UK suffered from banks that were unable to finance their activities due to a shortage of liquid capital - or money, to put it bluntly. Many people, bankers included, have suggested that the City of London made a substantial profit from the quantitative easing programme for the reasons explained in appendix 2. Because most of the banks in question had considerable tax losses available to them it is highly likely that not many of the banks paid much tax on the profits they subsequently made from quantitative easing so this cash went straight to their bottom lines, and boosted their balance sheets. We have stronger banks as a consequence, better able to resist the pressure of any future financial storm that might hit them.

The justification for quantitative easing was the lowering of interest rates. This in turn, it was hoped, would encourage spending whilst providing the banks with cash from the proceeds of the sale of their gilts to lend to business. Unfortunately, quantitative easing seemed to mostly benefit the banks. It should not have been the mechanism to deliver that outcome, and if that was the objective then it has been an extremely underhand process, almost invisible to the public of the UK and unacceptable as a consequence. Instead it would have been substantially more honest to acquire equity stakes in those banks that have benefitted from quantitative easing. Instead, public money has been used to reflate the banks with the benefit going to the existing shareholders and those receiving bonuses rather than reflating the broader economy to the benefit of the majority.

### **Outcome 2: making funds available to business**

The stated aim of quantitative easing was to make funds from banks available to business so that they could meet the pressure on them arising as a consequence of the recession.

The simple truth is that every report suggests that this has not happened. Banks claim that they have offered every loan that viable businesses have asked for, despite which the amount of business borrowing undertaken since the quantitative easing process began has fallen<sup>iv</sup>. As noted above, the funds have, instead, reflated the banks' balance sheets. It was only possible that one of these two objectives could be achieved. It is clear that banks took the benefit, and did not pass it on in the quantity required to other business in the UK. In this sense, quantitative easing has failed.

### **Outcome 3: a shortage of gilts for investment purposes**

It might sound rather odd that at the time when the government has been reportedly borrowing in record amount there has been a shortage of government gilts to meet the demand for savings and yet this has been the case. Although £155 bn of gilts were issued a total of £199 bn were repurchased – hence the net shortage in a market which had been demanding, on average, more than £35 bn of new gilt issues a year to keep up with demand from pensioners and others for this type of savings medium.

It is a known phenomenon that during a recession people save more. That is because they face increased personal risk, whether from the loss of a job, or because state benefits might be cut, or simply because in times of stress people hoard, and have always done so. This phenomenon is reflected in data published by the Office for Budget Responsibility when commenting on the June 2010 budget which said that household savings ratios jumped markedly at the onset of recession, from about 2% of income to 7% of income, and went on to suggest that they will stay at or near this level until 2015 at least. Given that business investment ratios fell at the same time this makes clear that there was a sudden boost in savings as recession started. Due to risk aversion associated with recession it was likely that demand for gilts would have risen as a result<sup>v</sup>:

However, although the government issued £155 billion of gilts in 2009 - 2010<sup>vi</sup> because the Bank of England bought £199 billion worth of gilts starting in March 2009 then, even after allowing for significant bank profits as noted above, there were probably no net new gilts for savers to buy during the course of that year. This compared markedly with earlier years when an average of around £35 billion of new gilts had been issued each year. The result, perversely, was that there was a shortage of government debt available to those organisations that need gilts, such as pension funds, for whom it is essential to buy and own gilts to meet their requirement to pay long-term stable rate of return to those already in retirement.

### Outcome 4: asset price inflation

This shortage in the supply of supply of gilts had a significant knock-on effect on the price of other assets used for savings purposes. This can, for example, be seen in the performance of the FTSE 100. A three-year summary of this, extracted in November 2010 is as follows<sup>vii</sup>:



The market reached its depth in February 2009, and ever since the quantitative easing programme began has risen steadily, excepting the mild crisis of confidence that preceded the general election in May 2010 as a result of problems in Greece.

There is no obvious economic reason for this increase. Indeed, logically markets should have remained depressed. There are few signs of significant economic growth. There are significant indications of cutbacks in government expenditure, consumer spending, investment, and other economic drivers of future profitability. Despite this markets have risen. We suggest that is because excessive funds, being saved for the reasons noted above by both households and corporations have been moved by investment managers acting on their behalf into the UK stock exchange and other markets (such as those for commodities, including metals and foodstuffs) because those funds have not had sufficient access to the gilts market, because the government has not met the demand for



gilts to be used for savings, and has instead been repurchasing gilts, so denying them to the savings market.

There are important consequences of this. First, a mini asset boom has been created, maybe inadvertently. Given the whole problem that gave rise to the financial crisis was asset price inflation, or booms, this replicates the whole financial failing of the pre-2008 era. Second, because many of the assets whose prices have been inflated, such as coffee which is at a thirteen year high<sup>viii</sup> or palm oil, which is up 45% in price in a year<sup>ix</sup>, feed (almost literally) into consumer price inflation, this policy does result in inflation, but not as a consequence of the direct printing money, which is what economists predicted.

### Outcome 5: deflation has been avoided

It is important to note then that one of the policy objectives of quantitative easing was the avoidance of deflation. Deflation can easily tip an economy into recession because people defer spending in the hope that prices will fall. There was widespread fear of deflation in early 2009, a fear that has still not entirely gone away. Quantitative easing has probably prevented this deflation occurring by inadvertently boosting commodity prices as noted above, and that must be recorded as a success (even if an accidental one) for the programme. However the interaction between quantitative easing and the Labour Government's reflationary policy in increasing economic activity is still unclear.

### Outcome 6: low interest rates

Another policy objective of the Bank of England, the government, and the quantitative easing programme was the maintenance of low rates of interest within the UK economy with the objective of stimulating economic activity. The programme has clearly helped achieve this with regard to interest rates on government debt, and on-rates of interest paid by banks on savings, but the impact on the cost of borrowing to business, in particular, has been marginal. As has been widely reported, businesses have continued to pay significant premiums over bank base rates. This is because banks say that the risk inherent in such loans has increased. As a result it is not clear that the programme has delivered the new economic activity via increased bank lending to business that was intended.

### Overall assessment

Overall it has to be concluded that Alastair Darling was right: no one can be sure what happened with the money created by the quantitative easing programme. There may have been some favourable outcomes, but who can be sure? And if the intention was to provide benefit outside the financial services sector then the case for arguing the programme a success is quite limited.

## Part 2

# Making quantitative easing green – by putting green bricks in the wall

## Quantitative easing again?

Despite doubts about the effectiveness of the quantitative easing programme in both the UK and the USA, the USA commenced a second round of quantitative easing in November 2010. Its financial situation is, admittedly, more precarious than the UK because the risk of an imminent return to recession is considered greater in the USA than the UK, but many think that the UK might follow suit with a new round of quantitative easing soon.

We have no objection to a new stimulus for the UK economy: indeed, as members of the Green New Deal group we have strongly argued in favour of such action<sup>x</sup>. The rest of this report looks at how a new form of quantitative easing - we call it green quantitative easing 2 – or Green QE2 for short - might achieve the outcomes desired for the original quantitative easing programme, but which the latter failed to deliver.

## Green QE2 - the objectives

The quantitative easing programme was created in haste, and delivered against a back drop of fear. Green QE2 can be provided in a more organised, planned and directed fashion. We suggest that the objectives should be as follows:

- To provide the boost to the rest of the economy that the banks and financial services sector received from the first round of quantitative easing;
- To finance a Green New Deal;
- To promote new investment in productive capacity in the UK economy;
- To refinance existing government related loans at low cost, so freeing public sector organisations and agencies to undertake new economic activity.

These are integrated and related objectives with a theme in common. In each and every case we are suggesting that the government spends the funds made available to the next likely round of quantitative easing to feed directly into the economy, and does not do so through the existing commercial, High Street and investment banks. This is a radical and significant change from the first programme. Banks benefited from that programme, but did not pass the benefit on. The risk of that recurring is unacceptable. It is not the banks that need reflation now, it is the prospects of the wider economy and ordinary people of the UK that need enhancement at this time. The Green QE2 programme we recommend seeks to achieve that objective using the mechanisms we describe in the remaining sections of this report.

## The Green New Deal

The Green New Deal group has argued that the recession followed a large-scale collapse in private investment expenditures, caused in turn by irresponsible lending by the financial sector and inadequate regulation by Governments too in awe of the supposed wonders of the market. This situation is being made worse by the programmes for cuts.

Public expenditure must play a central role in compensating for this failure of private demand. Public expenditure must also be used to create the context that encourages the use of private capital to help fund the huge infrastructural costs of moving to a more sustainable economy. So under the Green New Deal cuts are not just to be reversed: we argue that there is need for a large-scale expansion of public investment expenditures. In this context we now argue that a Green QE2 programme should be used to fund these expenditures.

In the Green New Deal group's second report we argued for a £50 billion programme of public works expenditures<sup>xi</sup>. Expenditure should, we argued initially be focused on the energy sector, but then later move on to initiatives to minimise the use of raw materials use and to put our food system on a more sustainable footing. We did, in addition, suggest direct funding the infrastructure spending we need to revive the economy. This could be undertaken thorough a national investment fund or bank. Such an approach was recently proposed by Lord Skidelsky in the House of Lords<sup>xii</sup> who did, rather eloquently echo our case:

*Ministers are constantly exhorting banks to lend. Banks say that there are no borrowers, by which they mean borrowers at the going interest rate. However, here is a suggestion for overcoming this blockage which is consistent with the deficit reduction programme. The government should set up a national investment bank, which they would capitalise and mandate to spend £X billion a year on investment projects at interest rates low enough to fulfill the investment mandate. We are already promised a tiny prototype of this in the proposed green investment bank. Candidates for such investment would be infrastructure projects such as the high-speed rail ..., road building and repairs, house construction by local authorities, or projects to do with carbon emissions-insulating houses, solar panels and so forth. Lending by the investment bank would not affect the deficit and so would not spoil Mr Osborne's austerity story. True enough, subsidised interest rates imply a lower expected return on equity than from current lending, but a lower return is still better than no return, which is what idle capital now earns.*

The Green Investment Bank to which Lord Skidelsky refers has been offered just £1 billion of funding by the government<sup>xiii</sup>. This is wholly inadequate: whilst the amount of capital provided to the banks by quantitative easing is unknown, it is undoubtedly very many times this sum. The rest of the economy needs a boost of at least an equivalent amount. In an earlier report we suggested how at least £20 billion a year for infrastructure development and work creation could be released from the annual contributions made to UK pension funds<sup>xiv</sup>. It is our suggestion that sum should be made up

to at least £50 billion in the first year of the operation of such a fund from capital subscribed under a Green QE2 programme. This can provide the impetus to create the Green New Deal; the vast range of carbon efficient businesses that will support this activity and the local employment opportunities that will be generated as the UK transforms itself to a low carbon economy.

Secondly, and as Lord Skidelsky also implied, and as the Guardian newspaper has endorsed<sup>xv</sup>, a second round of quantitative easing should involve direct expenditure on new infrastructure projects in the UK. For example there is a desperate need for new energy efficient social housing in this country, for adequate investment in railways, not to mention a reinstatement of the schools rebuilding programme. Undertaking these activities would give the economy and immediate shot in the arm as well as providing infrastructure of lasting use which would more than repay any debt incurred in the course of its creation.

This is the result of the 'Keynesian multiplier' effect. This is the phenomenon that occurs when government borrowing to fund investment takes place during a time of unemployment. That borrowing then directly funds employment. That new employment does four things. First it reduces the obligation to pay benefits. Second, it means that the person in that new employment pays tax. Third, it means their employer pays tax on profits they make. And finally the person in employment can then save, which means that they help fund the government borrowing which has created their own employment.

As has been shown<sup>xvi</sup>, broadly speaking the tax lost and costs incurred when a job paying £25,000 is cut in the UK amount to about £23,000. That means that investment that creates new employment has only to pay a very modest return, or the person whose job is saved has only to make modest savings, or to spend modestly in the economy, for their new job to pay for itself in terms of reducing the deficit. If that investment does, as we suggest and as past experience has shown, result in the deficit being reduced, then of course this means that borrowing to create that investment and consequent new employment quite literally pays for itself.

We stress, what we propose is borrowing for investment, not borrowing for current spending. We are not alone in arguing this. As Martin Wolf, the eminent Financial Times columnist has said<sup>xvii</sup>:

*Borrowing is no sin, provided we use the funds to ensure that we bequeath a better infrastructure to the future.*

This is what we believe the programme we recommend would do and this is precisely why it is appropriate to do it now when the cost of government borrowing is so low, a point Wolf and Skidelsky also make. This borrowing now to spend into the economy is the basis for the first stage of Green QE2 – and of the Green New Deal.

We see three ways to deliver this spending into the economy. Firstly, the government could spend directly. This is not the time for the government to be reducing its investment in the UK, as it is doing. This is the time for it to be spending more, directly, on the infrastructure the UK needs.

Secondly, it has to partner the private sector and provide it with the incentive to invest. We believe that this would be best done through a National Investment Bank intended to provide direct investment into businesses, large and small, that can show their potential for creating new employment opportunities in the UK and that will revive the UK economy now and in the future. These investments must have employment creating conditions attached, must be outside the financial services sector and must meet green criteria. Beyond that this bank would have the job of investing in partnership for the long term alongside UK business with the objective of earning a return for the UK tax payer. It would be in the style of a German bank and provide equity finance in the capital of a company, as well as more conventional bank loan facilities.

Thirdly, based on the work we have undertaken with local authorities and other agencies who want to green the UK economy and its households in line with the principles of the Green New Deal, we believe that this money must be made available as a fund on which local authorities and other agencies can draw to invest in local partnerships with the private sector to deliver the green revolution needed in each local authority area in the UK. We know that the private sector can deliver enormous carbon savings in the UK, through funding the creative use of feed in tariffs, insulation, double glazing, local generation and much more. But in most cases this needs local coordination and delivery in partnership with a local authority to ensure that the economies of scale needed to optimise results are available. This effectively requires local authorities to bear some of the risk in starting these projects which have enormous potential to create employment in the UK. Local authorities do not, however, have the capital to draw on to take that risk. We recommend Green QE2 be used to deliver the funds that are needed for local authorities to draw on to take that risk. It should also provide the local capital that is needed to ensure the private sector joins them in delivering local green solutions. This will help create the employment we so badly need and in the process generate long term savings for the UK that will more than pay the cost of this debt and amply cover the risk taken. This is the Green New Deal in action.

## Repurchasing debt

That same low cost of borrowing does, however, bring us to final issue we believe Green QE2 should address.

The first round of quantitative easing bought up debt already in issue in the market place. £199 billion of the £200 billion spent was used to buy government debt, or gilts.

As is obvious from our analysis, we have reservations about continuing buying gilts, but there is one type of debt that we do believe should be repurchased as part of the Green QE2 programme – and that is the debt issued under the Public Finance Initiative (PFI) programme.

According to data from HM Treasury reproduced by the Guardian newspaper<sup>xviii</sup> some £56 billion of projects have now been financed by PFI at a total eventual cost of £252 billion. The ratio of cost to benefit is sufficient evidence in itself of the appallingly poor value for money inherent in these projects, many of which are now owned by banks. If cash has to be injected into the economy to provide liquidity then there can be no doubt that one of the best way to



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do so for the future benefit of the UK would be to buy out all PFI schemes now, at considerably less costs than QE1, but in the process reduce ongoing costs to the UK taxpayer over the next thirty years or more. The around £200 billion 'saved' could then at least in part be allocated instead to continue to finance Green New Deal initiatives over the decades to come. That is why we believe that this is a part of Green QE2. If new legislation to empower such arrangements is required we would argue that is a necessary price to pay to achieve this important social and financial goal for the UK as a whole.

## Appendix 1 – What is quantitative easing?

The Financial Times describe quantitative easing as follows:<sup>xix</sup>:

*Central banks normally set the price of money using official interest rates to regulate the economy. When interest rates are close to zero there is another way of affecting the price of money: Quantitative Easing (QE). The aim is still to bring down interest rates faced by companies and households and the most important step in QE is that the central bank creates new money for use in an economy.*

*Only a central bank can do this because its money is accepted as payment by everybody. Sometimes dubbed incorrectly "printing money" a central bank simply creates new money at the stroke of a computer key, in effect increasing the credit in its own bank. It can then use this new money to buy whatever assets it likes: government bonds, equities, houses, corporate bonds or other assets from banks.*

*With the central bank weighing in, the price of the assets it buys should rise and the yield, or interest rate, on that asset will fall. With cheaper borrowing the hope is that the central bank will again encourage greater spending, putting additional demand into the economy and pulling it out of recession. As the money ends up in bank deposits, banks should also find their funding position improved and make them more willing to lend.*

## Appendix 2

### How the banks make money out of quantitative easing

When it undertakes quantitative easing the Bank of England buys gilts from commercial banks and other institutions, such as pension funds. About 99% of all quantitative easing was used to buy gilts in this way, or £199 billion out of £200 billion in all.

However, if the Bank of England is buying second-hand gilts (in other words, those already issued, and which had been owned by High Street and investment banks and pension funds for some time) then the Bank of England need not buy those second-hand gilts at their original issue price. If, as is likely, the gilts that the Bank of England bought under the quantitative easing programme had been in issue for some time then it is highly likely that the coupon or nominal interest rate paid upon them was somewhat higher the current gilt rate, which is currently at an all-time low. That does, however, mean that the price at which the gilts were being repurchased was above the original issue value because this is the way in which the market adjusts the nominal or coupon interest rate on gilts to the current prevailing market rate. As the current interest rate falls so the price of gilts goes up, and vice versa.

To explain this mathematically, suppose that the current gilt rate is 4%. In other words, new £100 gilt pays £4 of interest per annum. There are, however, gilts out there which were issued at 5% per annum. The bond market does not ignore this difference, instead it adjusts the price of the gilt already issued to reflect the current prevailing interest rate. As a result the price of the gilt already in issue which is paying £5 a year is adjusted so that the effective rate of interest it plays is reduced to the current 4% and rate of interest. It can do this by increasing the value of that gilt from £100, at which it was issued, to £125. £5 is 4% of £125. The result is that the bank or pension funds that now owns that gilt makes a profit of £25 on the original purchase price, if it can sell the gilt it owns that has now gone up in value back to the Bank of England under the quantitative easing programme.

Because the government has effectively forced the price of gilts up by pushing the interest rate down in pursuit of its monetary policy, banks and pension funds which owned gilts have, without having to take any action or initiative of their own, made a significant profit.

## Appendix 3 - About Finance for the Future

Finance for the Future is a partnership between chartered accountant Richard Murphy and environmentalist Colin Hines.

Richard Murphy is also the director of Tax Research UK and founder of the Tax Justice Network and a regular blogger on tax reform at [www.taxresearch.org.uk/blog](http://www.taxresearch.org.uk/blog).

Colin Hines is the creator and convener of the Green New Deal group.

Together Richard and Colin have worked on the Green New Deal, the promotion of local authority bonds and pension reform, all with the objective of releasing funding for green investment in the UK.

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Financial support for the research undertaken to produce this briefing, from the Network for Social Change, the Joseph Rowntree Charitable Trust and the Calouste Gulbenkian Foundation, is gratefully acknowledged, but the report remains the sole responsibility of Finance for the Future LLP.

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## Endnotes

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<sup>i</sup> Taable 1.1. here <http://www.bankofengland.co.uk/publications/other/monetary/TrendsOctober10.pdf>

<sup>ii</sup> Article 104 of the Maastricht Treaty forbids central banks from purchasing government debt. It says:

Overdraft facilities or any other type of credit facility with the European Central Bank or with the central banks of the Member States (hereinafter referred to as “national central banks”) in favour of Community institutions or bodies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States shall be prohibited, as shall the purchase directly from them by the ECB or national central banks of debt instruments.

<sup>iii</sup> Former Chancellor Alastair Darling (ref ‘Darling calls for investigation into QE’s effects before its expansion’ [Faisal Islam Channel 4 News](http://blogs.channel4.com/faisal-islam-on-economics/darling-calls-for-investigation-into-qes-effects-before-its-expansion/13360) 25 October 2010 <http://blogs.channel4.com/faisal-islam-on-economics/darling-calls-for-investigation-into-qes-effects-before-its-expansion/13360>)

<sup>iv</sup> <http://www.bankofengland.co.uk/publications/other/monetary/TrendsOctober10.pdf>

<sup>v</sup> [http://budgetresponsibility.independent.gov.uk/d/junebudget\\_supplementary\\_material.pdf](http://budgetresponsibility.independent.gov.uk/d/junebudget_supplementary_material.pdf)

<sup>vi</sup> Table B1 [http://www.hm-treasury.gov.uk/d/junebudget\\_complete.pdf](http://www.hm-treasury.gov.uk/d/junebudget_complete.pdf)

<sup>vii</sup> <http://markets.ft.com/tearsheets/performance.asp?s=572009&ss=WSODIssue&ftauth=1290718650544>

<sup>viii</sup> <http://www.ft.com/cms/s/0/41b4ddb0-dc0f-11df-884a-00144feabdc0.html#axzz16OL0B53U>

<sup>ix</sup> <http://www.ft.com/cms/s/0/18b08792-f72b-11df-9b06-00144feab49a.html#axzz16OLLU6uw>

<sup>x</sup> See <http://www.neweconomics.org/projects/green-new-deal> for details of the Green New Deal reports

<sup>xi</sup> <http://www.neweconomics.org/publications/cuts-wont-work>

<sup>xii</sup> <http://blogs.ft.com/economistsforum/2010/11/lord-skidelskys-speech-on-the-uks-spending-review/#more-12381>

<sup>xiii</sup> <http://www.independent.co.uk/news/uk/politics/1-billion-to-launch-green-investment-bank-2111807.html>

<sup>xiv</sup> <http://www.financeforthefuture.com/MakingPensionsWork.pdf>

<sup>xv</sup> <http://www.guardian.co.uk/commentisfree/2010/nov/04/world-economy-desperate-measures>

<sup>xvi</sup> <http://www.taxresearch.org.uk/Blog/2009/12/08/the-only-way-to-cut-government-debt-is-to-increase-government-spending/>



<sup>xvii</sup> <http://www.ft.com/cms/s/0/fb6c9312-f8d1-11df-b550-00144feab49a.html#ixzz16PUZdcy8>

<sup>xviii</sup> <http://www.guardian.co.uk/politics/datablog/2010/nov/19/pfi-public-finance>

<sup>xix</sup> <http://lexicon.ft.com/term.asp?t=quantitative-easing>