WITNESS STATEMENT

Pat McArdle

10th April 2015
1. Introduction

I refer to the Direction to Attend and Make a Statement in Writing Pursuant to Section 67(1) of the Houses of the Oireachtas (Inquiries, Privileges and Procedures) Act 2013 as received by me on 2 April 2015 (the “Direction”). I note that the Direction relates to my role as Chief Economist of Ulster Bank Ireland Limited and does not, therefore, cover any activities that I may have undertaken since I left Ulster Bank in mid-2009.

2. Biographical Information

I joined Ulster Bank (UB) in 1996 becoming Group Chief Economist in 2002, and eventually retiring in June 2009. While in Ulster Bank, I was on the Editorial Board of the Irish Banking Review, a member of the Industry Advisory Panel to IFSRA and a Trustee of the UB Pension Fund. Prior to joining Ulster Bank, I was Head of Economic Research at NCB Stockbrokers and before moving to the private sector in 1986, I worked in the Department of Finance and with the EU Commission.

3. Background / Context

As explained in my letter of 25 March 2015 to the Joint Committee, the role played by economists in major banks varies quite a bit. In my case, the focus was primarily external and consisted of daily, weekly, monthly and quarterly publications and commentaries designed to generate a strong media presence. A variety of internal demands also had to be accommodated. In the main, this consisted of regular written economic briefings for the quarterly Board meetings as well as some key risk committees. I gave annual presentations to the main UB Board and intermittently to other fora. I also inputted into a number of medium-term plans and reviews. However, I was not a member of the Board or of any policy-making committee and did not have a decision-making role.

The key focus was on short-term forecasting, and we produced and published quarterly forecasts for GDP, inflation, employment, etc., over a two-year forward time horizon. Longer-term projections in Ireland were and are the preserve of the ESRI which uses a model-based approach, producing forecasts for up to a quarter of a century ahead every two or three years. For the economic input into long-term planning, we relied on the ESRI Medium Term forecasts. We invited John FitzGerald to give presentations to senior UB personnel after publication of the Medium Term Reviews and, as already mentioned at the Inquiry, we involved him in the economic input for the 2007 ICAAP stress testing.

I should add that any views I offered were mine alone and there was no difference between the internal and external positions I adopted. I was given freedom of speech by Ulster Bank even if some of the things I said made them uncomfortable on occasion. This applied, in particular, to the two main areas that are relevant to the Inquiry. I was a trenchant critic of the loose fiscal policy adopted and I was an outspoken advocate of a soft landing. At the same time, I was of the view that a severe housing slowdown was inevitable and that this would be accompanied by much reduced house construction, bank lending, employment in construction and tax receipts.

4. Lines of Inquiry

Further to the Direction, I note that the Inquiry wishes to pursue the following lines of inquiry with me: B2a, B2c, R1c; R2c; R4a; R4c; C2b and C2c “relating to my role(s) as Chief Economist of Ulster Bank Ireland Limited.” I note also that the lines B2a and B2c have been
retained in the Direction notwithstanding that I asked that they be wholly or partially removed as I had limited involvement in them from a UB perspective.

4.1 Effectiveness of banks’ credit strategies and risk management - Appropriateness of property-related lending strategies and risk appetite [B2:a]

Clearly, with hindsight, the credit strategies of the Irish banks were unwise and the risk management was ineffective¹. However, the actions taken must be judged by reference to the conditions obtaining at the time and, in particular, the failure of the Regulator to curb excessive practices in Anglo Irish Bank which the other banks, rightly or wrongly, felt obliged to follow.

In this respect, I disagree with the conclusion in the Honohan Report that the major responsibility lay with the directors and senior managements of the banks that got into trouble. In my view, the Regulator had a higher degree of responsibility. The Regulator was the only one with full information on large exposures, in particular, on the multiple cross-exposures to individual large borrowers and, critically, the only institution that could have sought to curb excessive balance sheet growth².

In 2009, Patrick Honohan, then Professor of Economics at TCD, wrote³ that:

“A very simple warning sign used by most regulators to identify a bank exposed to increased risk is rapid balance sheet growth. An annual growth rate of 20 per cent real is often taken as the trigger... Anglo Irish Bank, crossed it in eight of nine years, and indeed its average annual rate of growth 1998-2007 was 36 per cent... So this was a very obvious and public danger sign.”

Only the Regulator had the capacity to do something about this⁴ and the alarm bells should have been ringing in Dame Street for the best part of a decade. In an era of intense competition⁵, it is asking a lot to expect individual bank boards and management to curb lending, lose market share, incur the opprobrium of their shareholders and, potentially, their own jobs. The proof of the pudding is in the eating and, in the event, they all chose to stay with the herd and go over the cliff together.

4.2 Effectiveness of banks’ credit strategies and risk management - Analysis of risk concentrations in the base, the adverse economic scenarios and the impact on capital structure [B2:c]

While I had no role in determining Ulster Bank’s credit strategies and risk management, I did, however, have an involvement in the stress testing.

In 1999, the Central Bank of Ireland instituted stress testing. Initially, the tests were top-down and were conducted within the Central Bank. Beginning in 2004, they were supplemented with bi-annual bottom-up tests conducted by the individual banks. Results for the 2004 and 2006 bottom-up tests are available on the Central Bank’s website.

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¹ While the same was true of many other countries, the Irish situation was more extreme.
² Whether or not it would have succeeded is another matter.
³ http://www.irisheconomy.ie/Crisis/HonohanCrisis.pdf
⁴ Apart, of course, from the Anglo Board and Management.
⁵ This was encouraged by the Regulator – remember the famous Tracker Mortgage Ad.
Baseline and Shock scenarios were provided by CBFSAI and the banks were asked to estimate the impact on capital. With hindsight, the shocks were not sufficiently severe.

Broadly speaking, the scenarios involved cumulative declines of real GDP of 2 to 4 per cent with unemployment roughly doubling, from around 4 per cent at the outset to almost 10 per cent three years later, compared with virtually no change in the baseline. The divergence in house price movements was more marked; in the 2006 test, the baseline assumed continued cumulative growth of 20 per cent compared to a scenario assumption of a 20 per cent decline.

The 2006 conclusion was typical “the central expectation remains that the current shock-absorption capacity of the banking system leaves it well placed to withstand pressures from possible adverse economic and sectoral developments”. On 20 November 2007, the Minister for Finance told the Dail that the CBFSAI has indicated in its Financial Stability Report of 2007 that the stability of the Irish banking system remained robust when assessed by the usual indicators of financial health such as asset quality, profitability, solvency, liquidity and credit ratings.

The 2006 Irish Stress tests were also reviewed by the IMF as part of their FSAP Programme. The IMF concluded:

“The results of stress tests undertaken through the CBFSAI … confirm that the major domestic lending institutions have adequate capital buffers to cover a range of large but plausible hypothetical shocks”.

This has been a source of embarrassment to the IMF ever since.

I had little involvement in the 2004-08 tests as the economic scenarios were produced by the Central Bank and the modelling of the impact on bank capital was carried out by the Finance and Risk people in UB.

A more advanced approach to stress testing commenced with the introduction of Basel II and Internal Capital Adequacy Assessment Policy (ICAAP) in 2007. ICAAP submissions were required by IFSRA and also the FSA in the UK. These tests were more severe than the earlier Central Bank scenarios, although in the event, they, too, proved to be inadequate. Global adverse scenarios for the UK, the US and the euro area were produced by RBS Group Economics and our job was to derive a consistent set of Irish scenarios. To this end, we provided the ESRI with three global shock scenarios - mild, medium and severe recessions - and John FitzGerald and his team used the ESRI Hermes Model to simulate the impact on Ireland. The simulations covered the five-year period to 2010. These tests were not Ireland specific, i.e. no additional allowance was made for a domestically generated recession on top of the global one. I passed these results to Group Risk and had no further involvement as far as I can recollect.

4.3 Effectiveness of the regulatory, supervisory and governmental regime structure - Appropriateness of the macro-economic and prudential policy [R1:c]

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6 Page 86 of the May 2010 Honohan Report on the Banking Crisis; details of the 2008 stress tests were not published.
8 Each scenario had two variants, solvency and non-solvency, i.e. a total of six scenarios, and I took the view that the only way to get a consistent set of results was to use a model. The ESRI had the only model available. Mr FitzGerald referred to this work in his evidence to the Inquiry.
I have already dealt with the stress testing aspect of the supervisory regime at Section 4.2 above.

Apart from the emergency lending facilities and the tightening of fiscal supervision, the main response to the crisis has been a regulatory one. Prior to the crisis, the effective capital ratio requirement of the largest banks was less than one per cent under Basel II\(^9\). Since the crisis, required capital ratios have been boosted to 8 – 10% and the quality of capital required is much-improved. In addition, supervision of euro area banks has been transferred from national supervisors to the ECB. All this indicates that failures of supervision were at the heart of the financial crisis.

One frequently sees blame for the crisis attributed to “light touch” “principles based” regulation. I believe this criticism is misplaced as the rules-based system in the US failed also. In my view, the “principles based” approach is the better one; however, it most definitely should not be “light touch”; in fact, the penalties for transgressions should be draconian “pour encourager les autres”.

Macro-prudential regulation is a new concept that emerged in the wake of the recent financial crisis. While prudential measures are primarily concerned with sound banking practice and the protection of depositors at the level of the individual bank, macro prudential can be said to focus on problems that bear upon the market as a whole as distinct from an individual bank. The recent Central Bank limits and ratios on mortgage lending are a good example.

Could the Regulator have used a macro prudential toolkit before the crisis? Though there is some debate about the powers they had, the answer seems to be yes. In fact, the Regulator did tighten capital requirements for high loan-to-value ratio loans in March 2006, albeit only modestly\(^10\). I conclude, therefore, that the regulatory and supervisory regime was ineffective before the crisis.

That brings me to Government macro-economic policy. For a long time, the Department of Finance was criticised for the bank failures. However, I think that the Department, having set up the Regulator, was entitled to rely on it to do its job. Neither the Department nor the Minister for Finance had a specific role in prudential policy.

However, it did have a clear role regarding macro-economic policy, in particular, fiscal policy. Here there is confusion and the Regling and Watson Report did not help as it gave the impression that fiscal policy was pro-cyclical without actually saying so explicitly. In fact, Ireland respected the Stability and Growth Pact (SGP) rules and was even lauded for its responsible fiscal policies by the international agencies\(^11\). However, the fiscal calculations were radically revised after the crash and Irish fiscal policy was deemed to have been very pro-cyclical only with hindsight.

That notwithstanding, many Irish economists criticised the fiscal policy pursued as it was clear that there was an excessive reliance on property-related taxes which were used to fund higher spending and lower taxes. It was also clear that property tax incentives were inappropriate and should have been discontinued much earlier.

\(^9\)http://www.moneyandbanking.com/commentary/2014/10/6/making-finance-safe

\(^10\)The capital required to back a 100% LTV mortgage went from 4% of the loan to 4.8% – an increase of just €4,000 on a €500,000 mortgage, hardly a major deterrent, and the LTVs continued to increase subsequently.

\(^11\)See Appendix 6 of the Wright Report on the Department of Finance for a summary of the annual recommendations by the EC, OECD and IMF.
my view, the macroeconomic policies pursued were inappropriate even if they were in line with the SGP and I said so at the time. The Wright Report includes a chart at page 22 which shows the difference between the June Budget packages proposed by the Department of Finance and the outcome in the Autumn Budgets. The cumulative difference is about €6 billion. Had the advice tendered been followed, the required correction would have been at least that much less.

4.4 **Effectiveness of the supervisory practice (Central Bank, Financial Regulator and Department of Finance) - Adequacy of the assessment and communication of both solvency and liquidity risks in the banking institutions and sector [R2:c]**

See Sections 4.2 and 4.3 above.

4.5 **Appropriateness and effective utilisation of the expert advice - Appropriateness of the expert advice sought, quality of analysis of the advice and how effectively this advice was used [R4:a]**

There is no tradition in Ireland of seeking expert advice and I doubt that this was done to any great extent by either the Department of Finance or the Central Bank before the crisis broke. However, that situation soon changed.

In an exception to this rule, IFSRA had two external advisory Panels, a Consumer Panel and an Industry Panel. The Financial Services Consultative Industry Panel was established by the Financial Regulator under the CBFSAI Act, 2004 with effect from 1 November 2004. The Minister for Finance appointed 20 members from across the financial services industry. I was appointed in December 2006 and remained there until it was abolished in 2010.

There were persistent concerns that are encapsulated in the following quote from the Panel’s 2008 Annual Report:

> “It is sobering to read in the Panel’s annual reports and observations many suggestions, especially in relation to the adequacy of and skills required in the Financial Regulator’s staff, combined with the need for enhanced IT resources, as well as the necessity for a more systemic and international focus of prudential regulation. Given subsequent events it is disappointing that more attention was not paid to these matters raised by the Panel”.

There was also a view that the regulatory side of the house was the underdog with the lion’s share of resources going to the consumer protection area.

Professor Patrick Honohan was Ireland’s best qualified financial academic having worked with the IMF, the Central Bank of Ireland, the ESRI, the World Bank and TCD. From almost a decade from 1998, Honohan was lead Economist and subsequently Senior Advisor on financial sector policy at the World Bank. Minister Lenihan consulted widely from late 2008 and I recall hearing that Honohan had contact with him and/or the Central Bank. Professor FitzGerald in his evidence to the Inquiry said that he referred the Minister to Honohan in either January or March 2009. It seems likely, therefore, that the Central Bank and the Minister were in receipt of expert advice from Honohan from early 2009 at the latest. Honohan was subsequently appointed Governor of the Central Bank in September 2009.

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12 In the 1980s, he was also Economic Advisor to Taoiseach Garret FitzGerald.
The Irish Fiscal Advisory Council is another example of change as regards the utilisation of expert advice, albeit that it was dictated by Brussels. However, it had a slow start and only recently acquired relevant expertise in tax revenue forecasting and expenditure control. Moreover, its recommendations have to-date been ignored by the Government. Should we have had an advisory Council before the crisis? Yes. Would it have made any difference? Unlikely – see my comments at Section 4.6 below on fiscal contrarians.

After he was appointed, Minister Lenihan canvassed advice from a wide range of experts and commentators – I had a few sessions with him in late 2008. He was probably instrumental in having Professor Alan Ahearne of NUIG, one of the contrarians, address the Fianna Fail Party in September 2008 and he appointed him as his economic advisor in March 2009.

In early 2009, the Department of Finance commissioned Dr. Peter Bacon, a well-known economist, to prepare a report on the setting up of NAMA, the bad loan asset management agency. Though this was widely criticised at the time, it now looks like an inspired decision.

In September 2009, the Department of Finance commissioned the Wright Report to examine its performance over the decade to the crisis and to advise how the Department might adapt to meet the challenges of the future – the Inquiry has already heard from Mr Wright. The Wright Report recommended that:

“The economic seminars by external economists, which were recently introduced by the Secretary General, should be made permanent”.

I gather that this was done. Wright also recommended that:

“The Department should immediately seek the secondment of skilled personnel on a two-year rotation from the Central Bank, NTMA, ESRI and other relevant bodies”.

The Department of Finance and the Department of Public Expenditure & Reform have also boosted their quota of economists and other experts as recommended by Wright.

I am not in a position to comment on the quality of the specific bank related advice that was sought around the time of the guarantee. That apart, however, it seems to me that, from autumn 2008 and increasingly in 2009, appropriate, high quality, expert advice was sought and, so far as I can judge, used effectively.

4.6 Appropriateness and effective utilisation of the expert advice - Analysis and consideration of the response to contrarian views (internal and external) [R4:c]

Here, I distinguish between the financial and fiscal crises which are related but separate.

As regards the former, contrarians were few and far between. At the global institutional level, the most notable exception was the Bank for International Settlements (BIS), often described as the central bank of central banks. As far back as 2002, Bill White, the BIS Chief Economist, warned about the real estate bubble

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13 I was the Economic Advisor to the Wright Report.
developing in the United States but was ignored. While he focussed on the US, his views are pertinent to other countries as well.

In a presentation in 2013\textsuperscript{14}, White reflected on why his warnings were ignored:

“There were a few who did warn that there were serious problems building up under the smooth surface of the Great Moderation. I would like to believe that we at the BIS saw it more clearly than many others, though certainly the timing and the precise nature of its unfolding eluded us... Why were these warnings (both public and private) not heeded? Why were the historical antecedents not given more emphasis? I am going to suggest in the immortal line of Flanders and Swan, that it was “A Tale of Seduction”. All of the parties who contributed to the crisis (borrowers, lenders, regulators, central banks, academics and politicians) were each seduced by various influences into believing different things that were not true. Moreover, since seduction normally involves more than one party, the relationships between these various parties also contributed to their having ‘no eye to see and no ear to hear’”.

In fact, no central bank, no ministry for finance, no regulator and, the BIS excepted, no international body warned in advance. The latter include the ECB, the EU Commission, the EIB, the IMF, the OECD and the World Bank. On the home front, one could add in the ESRI and NESC as well, not to mention economists in banks, stockbrokers and academia.

According to the most comprehensive book on the crisis\textsuperscript{15}, there were only two Irish contrarian economists - Professor Morgan Kelly of UCD and Professor Alan Ahearne of NUIG. Kelly authored an article on this in the ESRI Quarterly Economic Commentary in July 2007, the first and, as far as I am aware, the only substantive contrarian piece of research to be published.

At a Dail Committee in June 2010, Governor Honohan addressed the subject of contrarians. According to Honohan, Kelly was “an interesting character” and “well respected in the very technical economics field”, but he had moved away from his normal field and started to write about property booms. Honohan said regulators should always pay attention to contrarians “with coherent but not necessarily right views”. Contrarians were “nearly always wrong”, he added, but “it is the ‘nearly’ that matters”. “Did he just get lucky?” Honohan asked. “Maybe, but he was well known and a clever guy and more attention should have been paid to him.”

Ahearne was more mainstream – he had worked in the US Federal Reserve Bank on the Japanese economy which had experienced a collapse and had also researched housing booms and busts.

The views of both were widely rejected as they did not fit into the accepted conventional wisdom. I was one of those who rejected their views. In doing so, I was influenced by the Central Bank which had more economists than any other institution in Ireland and, I believed, the greatest expertise in this area\textsuperscript{16}. Unusually, the Central Bank’s 2007 Financial Stability Review\textsuperscript{17} contained a box entitled “The Economic Literature on International House-Price Cycles” which was, in effect, a refutation of Kelly’s thesis.

\textsuperscript{15}The Fall of the Celtic Tiger, Donal Donovan and Antoine E. Murphy, Oxford Press, 2013.
\textsuperscript{16}International bodies like the IMF and the OECD had similar views.
\textsuperscript{17}http://www.centralbank.ie/publications/documents/1.%20financial%20stability%20report%202007%20-20part%201.pdf
The Bank outlined three “important qualifications” to the studies on which Kelly had relied, viz.:

- these studies focused on real house prices whereas nominal house prices were key from a financial stability perspective and the results from analysing nominal house prices were very different;

- the models used in these studies tended to be univariate and did not account for the fundamental supply and demand factors that typically drove housing markets; and

- most house price declines had occurred prior to the 1990s when economic conditions were different, and hence drawing inferences based on past behaviour might be problematic.

The Central Bank reran the studies used by Kelly basing them on nominal instead of real house prices. The results showed that, historically, the majority of nominal house-price booms had not been followed by falls in nominal prices. Moreover, the majority of ‘booms’ and ‘busts’ had occurred prior to the 1990s, and the more recent experience was different. The reasons for this were unclear but were likely to be linked to the so-called ‘Great Moderation’ where volatility in a broad range of macroeconomic indicators had declined.

The fact that the Bank went to these lengths indicates that Kelly’s arguments were taken more seriously than is commonly supposed.

I had done some research of my own and recall being influenced by a US Study that found that 80% of booms had not ended in busts. The economic literature was not that clear-cut.

More important is the question of what could have been done had more attention been paid to the warnings. There is still a widespread view that had the contrarians been listened to, things would have been different. However, the warnings came too late to affect the build-up of credit – most of the credit growth took place from 2004 on and, in fact, had topped out by 2007 when the warnings came. Neither can it refer to the period from 2009 on for by then, experts and contrarians in the form of Honohan and Ahearne had become insiders and were influencing policy. It must, therefore, relate to the period around the introduction of the guarantee in September 2008. Would the guarantee have been introduced at all or would it have been limited had it been known that the issue was one of solvency rather than illiquidity? Almost certainly, but the house price collapse was by no means the biggest factor affecting bank solvency and the warnings were mainly about house prices.

Moreover, Kelly and Ahearne did not pronounce in advance on the guarantee – or if they did, I have no recollection of it. Kelly subsequently was clear on what he would have done - that both Anglo Irish and Nationwide should have been let go and, indeed, he argued that the guarantee on them should be withdrawn. However, that was after the event when it would likely have been regarded, in effect, as a sovereign default with all that that would entail. Ahearne was silent on this issue but he quickly became an insider.

Bleak though their warnings were, the contrarians did not foresee the scale of the disaster that was looming. Donovan and Murphy conclude:
“In retrospect, as with Morgan Kelly, Ahearne turned out to be a ‘prophet before his time’. However, even his clear cut and logical analysis did not go so far as to conceive of the extent of the property disaster or the impact on the banking system”.

This limited any potential impact that they might have had on the night of the guarantee.

The number of fiscal policy contrarians was much greater. The ESRI, Central Bank and a range of economists warned that policy was too expansive, that property tax reliefs should be curtailed and a few had calculated the impact a housing slowdown would have on the public finances. I was also one of the more severe critics of fiscal policy as the following quotes indicate:

"Finance Minister Brian Cowen should consider measures to slow down the (housing) market in the December Budget," Independent 22 Oct 2004.
"We have to question why we have generous tax breaks for a market like this” Independent 22 Oct 2004
“Government funks the big decisions” Finfacts 7 April 2009

These and other criticisms had no discernible impact on fiscal policy.

It is worth pointing out that even a soft landing would have had severe repercussions and these warnings, too, were ignored. There would have been implications for employment, unemployment and the Budget. I had calculated that the consequence would be a reduction in tax revenue of €2 to €3 billion. In July 2007, i.e. around the time of the Kelly warnings, I responded to a question from RTE on the implications for construction jobs. I put the loss in jobs at what now seems a modest 30,000 but it was headlined in each news bulletin for the rest of the day.

4.7 Role and effectiveness of the policy appraisal regime before and during the crisis - Role of advisors in analysing the crisis (to include crisis management options) [C2:b]

The fiscal policy response had been devised in the Department of Finance before the Troika arrived. I have nothing to add to what I have said above regarding the role of the banking advisors that were retained.

4.8 Role and effectiveness of the policy appraisal regime before and during the crisis - The liquidity versus solvency debate [C2:c]

The main question here is: were the banks illiquid or insolvent on the night of the guarantee? The answer to this lies in the valuation of collateral security, particularly in the commercial real estate portfolios of the banks. It is probably fair to say that those concerned were still of the – with the benefit of hindsight – mistaken view that property prices were not going to fall by the extraordinary extent that was subsequently experienced. Looked at from this light, it is easier to understand why the crisis at that point might have been viewed more as liquidity rather than solvency led.

According to Patrick Honohan

“Only the Regulator could have the full information on which to make a judgment on which banks are simply the victims of a systemic problem and have nothing of the “zombie” about them”.

There is strong evidence that the Regulator believed the problem to be a liquidity one and is likely to have advised the Government accordingly. In early October 2008, after the introduction of the guarantee, the IFSRA CEO said on RTE that ‘by any estimate’ the Irish banking system is ‘so well capitalised compared to any banks anywhere across Europe’ that it could ‘absorb any loans or any impairments’.

The Inquiry is best placed to determine the veracity or otherwise of these statements, including what the banks’ believed at that time.

5. **Qualifications**

While I have been promised full access to my files in Ulster Bank, practical issues have limited this to only a cursory inspection so far. This statement is, therefore, based largely on recollection and facts that are in the public domain.

Dated this 10th day of April, 2015

Signed: ______________________________________

Pat McArdle
JOINT COMMITTEE OF INQUIRY INTO THE BANKING CRISIS

SUPPLEMENTARY WITNESS STATEMENT

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Pat McArdle
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27th April 2015
1. Effectiveness of banks’ credit strategies and risk management - Appropriateness of property-related lending strategies and risk appetite [B2:a]

For this Line of Inquiry, I have been furnished with six documents, as follows:

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<th>Document</th>
<th>Title</th>
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<tr>
<td>Chartered Accountants Ireland</td>
<td>Ireland's Economy - Outlook bright for 2006 (JB)</td>
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<td>Ulster Bank</td>
<td>lowers forecast of Irish economic growth in 2008 Review May 08 (PMcA)</td>
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<td>Note re BOI review of Property Market - 30 May 2008</td>
<td>BOI Website (DMcL)</td>
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2. In the main, these consist of selected quarterly short-term forecasts published in 2008. However, in the case of UB, just one such review is included while two are from BOI and none from AIB. While the relevance of these forecasts to the Line of Enquiry B2a is moot, the small number of observations gives rise to a danger (a) that forecasts from one bank will be compared with those of another in an inappropriate manner, given the different time periods involved, and (b) that the evolution of forecasts over a period of rapid change will be missed. The only way to avoid this is to do a systematic comparison of the quarterly forecasts.

3. In February 2008, DKM Consultants launched an “Economy Watch Monitor” designed to compare the forecasts of the 10 to 15 short-term forecasters active in this area – these documents are available on their website. DKM produced three snapshots in 2008, two in 2009 and two in 2010. Table 1 shows the evolution of GDP forecasts for 2008, 2009 and 2010 at various dates between February 2008 and October 2010 based on the DKM reports. The lower part of the Table shows the outcomes as measured by the CSO, starting with the first estimate produced in March of the following year, with successive revisions in subsequent years.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>2008 GDP forecasts</th>
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<td>0.0 0.8</td>
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<tr>
<td>OECD*</td>
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<td>-1.5 -2.3 -0.7</td>
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<td>UB</td>
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<td>Average</td>
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<td>3.6 3.1 -1.7 -5.4 -8.3</td>
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</table>

4. Real, seasonally adjusted, GDP peaked in Q4 07 and troughed in Q4 09 - the peak to trough fall over the eight quarters was 12% - see Chart 1 - (the forecasts above give a slightly
different picture because they compare the average in one year with that of the preceding year). The turnaround was dramatic. In early 2008 the expectation was that 2009 GDP would grow by 3.6%; eighteen months later, the consensus was that it would fall by 8.3%. In the event, it fell by 6.4% according to the most recent CSO data (earlier releases had put the contraction as high as 7.6%). While 2010 was broadly flat, expectations that the Irish economy would quickly rebound were borne out and by end 2014 most of the lost output had been recovered. In general, there was little difference between the forecasts produced by the three banks (AIB, BOI & UB) and the rest.

5. As set out in my Witness Statement, medium-term planning in Ulster Bank was based on the ESRI’s forecasts. These are set out in Table 2 below.

<table>
<thead>
<tr>
<th>ESRI</th>
<th>GNP</th>
<th>Unemp</th>
<th>Housing</th>
<th>GNP</th>
<th>Unemp</th>
<th>Housing</th>
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<td>2005-10 averages</td>
<td>2010-15 averages</td>
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<td><strong>2003 Medium Term Review</strong></td>
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<td>12.2</td>
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<td>52,800</td>
<td>2.5</td>
<td>11.6</td>
<td>10,700</td>
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</tbody>
</table>

Dated this 27th day of April, 2015

Signed: Pat McArdle