NATS (En Route) plc price control review for Control Period 3, 2011 – 2015:
CAA consultation
October 2008

NATS (En Route) plc
CONSULTATION RESPONSE

January 2009
INTRODUCTION

NATS (En Route) plc (“NERL“) welcomes the opportunity to respond to the CAA’s consultation on the CP3 price control review process. This document sets out our response to the specific questions raised in the CAA’s consultation document.

We would be happy to discuss this response further with the CAA.

RESPONSE TO QUESTIONS

Q.1. The CAA invites interested parties to comment on the potential usefulness of benchmark analysis to inform the CP3 price control review, and on the CAA’s proposed approach to developing analysis of the available European data on comparative ANSP charge performance.

We welcome the CAA’s early thinking on the use of benchmarking in the CP3 review, given the complexity of comparisons between ANSPs.

We agree with the CAA’s comments on the shortcomings of unit rates as a direct indicator of the relative efficiency of ANSPs, given that they include costs other than those directly relating to the ANSP and are based on weight and distance. We agree that weight has no bearing costs.

To ensure that any benchmarking analysis is credible, robust and fit for purpose, we consider it essential that the analysis adheres to the following principles:

- **Comparability** – making sure that comparisons are on a like-for-like basis, adjusting for factors that influence costs such as size, traffic complexity (density, proportion of lower level (higher cost) versus higher level (lower cost) traffic and vertical/horizontal/speed interaction), the cost of living/taxation, seasonal variation in traffic flows and differences in accounting practices (including the demarcation between en route and terminal services). Benchmarking analysis should also recognise the safety regulatory restrictions based on the working hours of operational staff;

- **Proportionality** – identifying the key areas for review and how they should be reviewed, so that effort is concentrated on the major cost areas;

- **Best practice** – using respected and credible data sources; in particular, we agree that the data and expertise held by the PRU provides a good data source; and

- **Achievability** – recommendations resulting from the analysis should be practical and achievable in the context of running an ANSP, rather than theoretical and not focused on providing value to customers.

We confirm our willingness to co-operate fully with the benchmarking analysis.
Q.2. The CAA invites views on which of the two approaches outlined above would enable the CAA better to fulfil its statutory duties.

Q.3. Under the customer consultation approach the CAA invites views on:

- the suggested structure and governance of the customer consultation process;
- the proposed allocation of issues to NERL-airline consultation and to CAA scrutiny, respectively;
- the timing and balance of the review between customer consultation and the subsequent CAA consultation on regulatory proposals;
- the nature of the CAA mandate; and
- suggestions as to the procedures and protocols for consultation which might be incorporated in such a mandate.

Q.4. Do respondents have any other suggestions on how the process for the CP3 review might best be structured to meet the CAA’s regulatory requirements, recognising the scope for and constraints on airline users participating in this process?

NERL is a keen supporter of the Customer Consultation approach. We are creating a plan for CP3 which puts at its heart the requirements of our customers, delivered in an efficient way, with manageable risk and aimed at providing adequate shareholder returns. An effective Customer Consultation approach that features more direct interaction between NERL and its customers, building on the consultation measures already in place, provides an opportunity for us to engage with our customers and provide a more informed input to the CAA’s consultation for CP3.

In particular, we believe that there are valuable lessons to be learned from the CP2 review process. NERL considers that the CP2 review did not fully succeed in the following areas:

- **Knowledge** – a lot of time and resource was spent in ensuring that the knowledge was shared between NERL, the CAA and customers, in order to align understanding of our business;
- **Lack of engagement** – customers did not appear to be fully engaged throughout the entire CP2 process; we believe that this was due to “consultation fatigue”, as shown by the falling number of respondents to the CAA’s consultations, over the duration of the review; and
- **Process efficiency** – the CP2 review process was lengthy and therefore costly for all involved, without the subsequent advantage of a stronger working relationship between NERL and its customers, built up through direct meetings.

We believe that a direct consultation between NERL and its customers covering key strategic issues could mitigate against the risks of these perceived failures being repeated during the CP3 process. We further believe that the time spent on direct consultation will be a worthwhile investment in continuing to build our relationship with our customers.
In order for the process to be effective, it is essential that more clarity is provided on what the CAA would view as success criteria for a Customer Consultation approach. It is also important that clear milestones and deliverables are established at the outset and to ensure the process is properly defined.

In particular, we consider it important that the CAA mandates the process, to give it appropriate legal status. We believe that the way that the meetings are chaired, will determine the usefulness of the discussions. For this reason, we believe that a co-chair, comprising a NERL and an airline representative, would be best placed to steer discussions between NERL and its customers. We further believe that the CAA should monitor milestone progress on a regular basis (more regularly than highlighted in the proposal, and including an assessment of the Customer Consultation Working Group initial action plan), to ensure that the process delivers the information needed by the CAA to form the price control. To enable the CAA to fulfil this monitoring role, we believe that the CAA should be briefed, with copies of discussion minutes, after each meeting by NERL and a customer representative. We would welcome clarity from the CAA on what it expects from the 2009/10 Service and Investment Plan (“SIP”), which would contain much of the same material as elements of the CP3 discussion with customers. We would seek a SIP process that would allow customers the opportunity to consider our future plans, but would not duplicate the consultation effort for customers. At the end of the process, we believe that NERL should present its revised business plan to the CAA to enable the Regulator to conclude the price control review.

In general, we support the detail of the Customer Consultation proposal as outlined by the CAA. We recognise that there are lessons to be learned from the Constructive Engagement (“CE”) approach adopted for the BAA price control review and we are keen to work with our customers and the CAA to ensure that the Customer Consultation approach provides the appropriate forum for discussion.

If the Regulator-led approach is adopted, we would ask the CAA to be proportionate with its workload, allocation of time and resources and the size of consultation documents to ensure that the review is as efficient as possible. We believe that many of the lessons from the CP2 review should still be applied, even if the Regulator-led approach is adopted.

Q.5. Do respondents agree that Eurocontrol charges need to continue to be controlled by a revenue or price condition?

For reasons given by the CAA, we have assumed that economic regulation over the majority of the services we provide to customers will continue in CP3. Assuming that economic regulation remains in place, we believe that the current revenue cap model with partial volume fluctuation risk protection, should continue.

The current model reflects the limited ability of an infrastructure service provider to respond to rapidly changing business circumstances. Our licence requires the provision of the Core Services, regardless of demand from the airline industry. We need to maintain the capacity to service changing demand on a 24/7 open access basis. We cannot close sectors without causing a disproportionate effect on customers, who would need to re-route aircraft around the closed sectors. History (1990s) has shown that significant reductions in ATC capacity can take a decade to return to previous levels. Therefore, we believe it is appropriate for economic regulation to incentivise efficient development of capacity to match long
term demand trends, and to partially protect capacity from short term volume fluctuations.

We believe that there is little benefit to customers from exposing NERL to 100% volume and therefore, revenue fluctuation risks, for the following reasons:

- **Higher short term revenue volatility hinders the delivery of longer term customer requirements and priorities** – higher exposure to volume risk, introduces greater uncertainty around the revenue base of the company. This uncertainty could constrain the ambition of our business plans to deliver long term customer requirements and priorities. It also has the potential in the short term, to divert time and resources to activities with outcomes that may be sub-optimal in the long term;

- **Fixed costs prevent temporary reduction in costs** – we may not be able to reduce costs to match volume and revenue fluctuation. Similar to other regulated infrastructure providers, a high proportion of our cost base is fixed. This means that we are unable to significantly reduce our costs, without limiting capacity in both the short and medium terms, potentially having the effect of constraining the industry during a subsequent economic recovery.

We continue to seek long term permanent reductions in fixed costs (e.g. through the reduction in the number of centres and the introduction of less labour intensive technology etc), which benefit customers through lower unit rates;

- **Reduction in discretionary costs may not be desirable** – while it is difficult to reduce fixed costs, we could reduce discretionary variable costs; however, we believe that this would not be in the interests of customers. Typically, some of the costs that are discretionary are spent on long term investments, which grow our capability. Significant delays to capital investment could damage future capacity and service quality;

- **Risks increase the cost of capital** – the increase in volume fluctuation risk would raise the overall cost of capital and could affect our credit rating. Increased cost of capital would have the effect of raising the unit rate. A reduction in our credit rating would increase the cost of raising financing, which again, would raise the unit rate; and

- **Customers have benefited from current arrangements** – we prefer the current model, which allows NERL to seek long term cost reduction and lowers the unit rate through more efficient financing. The nature of the existing 50:50 volume risk sharing arrangement has meant that customers have benefited from £19m reduced charges during the upturn in traffic in the period 2006 to 2008, and net of the downturn projected in 2009.

With hindsight, NERL should never have been exposed to 100% traffic volume fluctuation risk and the changes agreed by stakeholders in the Composite Solution in March 2003, and retained by the CAA in its CP2 Price Control Decision, were appropriate. We continue to support the CAA opinion that:

“NATS should not revert to bearing 100% of volume risk, with the cost of capital reflecting this, unless there are reasons consistent with its statutory objectives to do otherwise”\(^1\).

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Further, we recognise that the CAA stated in its CP2 Price Control Decision:

“The CAA has sought to structure the price control so that NATS’ financial incentives are geared towards those outputs which matter most to users. One consequence of this has been the proposal to retain a control that is based on a 50/50 fixed/variable split, and to retain the ‘low volume supplement’ mechanism in the event that volumes fall below 80% of central forecasts. The CAA would expect these arrangements to form the starting point for the next [CP3] review”\(^2\).

We believe that the CAA’s CP2 decision reflects good regulatory precedent. We note other examples of economic regulation for UK regulated infrastructure providers that feature similar volume fluctuation risk mitigations. For example, the Office of Rail Regulation’s 2008 Network Rail price control determination continues a similar fixed/variable split in calculating charges\(^3\).

**Q.6. Do respondents agree with the CAA’s preliminary views on the scope of regulation of the London Approach?**

We accept that the CAA should continue to regulate the London Approach service. However, NERL does not agree with the CAA’s preliminary view that the case for bringing Luton and London City within the scope of the regulated London Approach service is not sufficiently strong. Further, it does not appear from the consultation paper that the CAA has fully considered the issues raised in paragraphs 6.83 to 6.87 in its paper.

In particular, we believe that bringing Luton and London City within the scope of the regulated London Approach service would provide:

- **Operational co-ordination** - safeguard the continued efficient operational co-ordination of these services;
- **Future development co-ordination** - enable a more co-ordinated, straightforward and transparent approach to managing the future development of a unified terminal control operation, for example where decisions are required around the allocation of scarce airspace; and
- **Equity for customers** - ensure that competing customers at the five major London airports would be charged on the same basis for approach services within the TMA, with a consistent billing methodology for services provided using shared assets.

We do not agree with the CAA’s view stated in 6.29 that the differing regulatory treatment of the approach services at the five major London airports is a minor inconsistency. There have been significant operational benefits for both airline users and NERL arising from the incorporation of the approach services provided to Luton and London City into the regulated London Approach service which we seek to retain. NERL foresees that there are significant changes coming that will impact the operation and hence cost of providing services in the LTMA in CP3 – in the form of SESAR and new runway developments. Having Luton and London City regulated in the same way as for the Approach services to the three largest London airports would simplify the investment cases if NERL is required to invest in new capacity.

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We understand the CAA’s reluctance to remove “an element of potential future contestability” (para 6.29), but we believe that this argument is more theoretical than practical. While it is possible that another ANSP could provide the approach services at Luton and London City, the fact that the approach services provided to the five major London airports currently share common assets, are co-located and require significant operational co-ordination, means that it would be very difficult for a new provider to provide the same level of service at the same or a lower cost. In fact, the introduction of an operational and safety interface between a new approach provider(s) and NERL (e.g. common safety management and co-ordinated change management etc), in a busy and complex terminal area such as London, could raise overall approach costs for airlines and could affect overall service quality.

We note that the CAA’s decision to price control the current London Approach was made against “the background that there was – and remains – no prospect of competition for NATS in the provision of this service”\(^4\). Given the potential lack of contestability the operation of approach services for the five major London airports, we would question why the CAA would not follow its existing policy precedent and extend the regulatory model to cover Luton and London City approach. Moreover, we consider that regulating the approach services at these two airports could enhance the contestability of the remaining contract based tower control services at both Luton and London City on account of the simpler service requirement.

The CAA highlights three complications involved in this policy change: i) a change to the charging structure at Luton and London City; ii) regulatory assessment of costs and revenue; and iii) inclusion of the services in the licence. We do not believe that the potential costs or regulatory burden of bringing the approach services for Luton and London City within the scope of the regulated business would be significant. For example, following the ending of direct charging for airport air navigation services at Heathrow, Gatwick and Stansted on 1 April 2008, NERL was required to set up new billing arrangements with airlines for the London Approach service. The administrative costs of doing so have been low. We already have an allocation of the costs and revenues involved in Luton and London City approach services, and so their inclusion in the CAA’s regulatory calculations should not pose a significant barrier. Finally, we believe that the CAA should expend the effort of a one-off change to the licence ambit, if this would save the industry from a potential significant risk of higher underlying approach costs across London, in the future.

Changes to London Approach charging, as a result of Single European Sky Regulation

We accept the principle of rebalancing the London Approach charge, consistent with the CAA’s statement in the CP2 Settlement and the SES Charging Regulation. Ahead of its consultation, we sought the CAA’s views on potential mitigations, to limit significant increases in London Approach costs, as a result of this regulatory change. We await the CAA’s guidance as to the extent of the rebalancing required. With this in mind, we also seek advice as to whether a mitigation strategy could be applied to protect London based customers from a sudden increase in the London Approach charge arising from rebalancing.

We recognise that the SES Charging Regulation comes into force on 1 January 2010 for ‘terminal charges’, whereas the CP3 period runs from 2011 - 2015. We await the CAA’s advice on implementation timing as set out in para 6.102.

**Q.7. Do respondents agree that there should be a separate price control for Oceanic services based on a relatively simple and low cost price review process?**

We agree that there should continue to be a separate price control for the Oceanic service, based on a relatively simple and low cost price review process, in light of the fact that this service provides a relatively small proportion of our total revenue.

**Q.8. Do respondents agree that there should continue to be no price cap for North Sea Helicopter services but the costs and revenues (excluding the East Shetland Basin) should continue to be taken into account in the charging till for setting the en-route charge condition?**

We agree there should continue to be no price cap for North Sea Helicopters (“NSH”) and that the single till approach currently used should continue. We already operate an annual consultation process on the projected costs and prices of the NSH service, with the small number of customers involved. We believe that the cost of separate regulation to NERL, the CAA and the small number of customers, from such a small revenue stream would outweigh any potential benefits.

**Q.9. Do respondents agree that it is appropriate for NERL work as part of the SESAR Joint Undertaking to be conducted by the regulated business and recovered through the Eurocontrol charge?**

NERL is a strong advocate of the SESAR initiative and seeks to be actively involved in driving the work forward. The level of investment in research and development and, ultimately, in implementation associated with the SESAR Master Plan cannot be borne by any single entity. We believe that the SESAR Joint Undertaking (“SJU”) will provide the best cost-effective mechanism to develop the necessary solutions to deliver the safety, service, value and environmental benefits required by our customers in the future.

Our involvement in the initiative will aim to ensure that we can develop our capability to continue to provide the en-route service on a cost efficient basis, as the industry changes. This basis (and the basis for other ANSP participants in the venture) is fundamentally different from an investment in a solely revenue generating vehicle. In particular, the aims of the SJU are aligned with our business aims and investment programme as set out in the NERL Long Term Investment Plan.

The intellectual property rights that are generated through the SESAR initiative will be freely available, and hence the benefits will be reaped for airlines across Europe, rather than being intended to provide any specific investment returns to NERL or any other ANSPs in the SJU. Furthermore, we believe that involvement in SESAR is fundamental to delivering the future system/concepts necessary to
achieve the future safety, performance and cost targets envisaged in the future under the UK regulatory framework as well as through SES II.

Since the benefits of our involvement in the SJU will return to customers in the future, we believe that it is appropriate that any additional costs incurred that are not funded through the SJU contribution should be recovered through the en-route charge.

Q.10. What are respondents’ views on how the risks of the SJU should be reflected in the price control?

The SJU is currently in a negotiation phase, finalising the contributions to be made by each party within the available funds. It is expected that the contributions will be scaled back from the initial proposals in order to achieve this, resulting in a risk that the full objectives of the SJU may not be achieved. Once the SJU is fully up and running we will have a partial ability to influence how it manages its own costs against its commitments, through our proportion of SJU voting rights and control of our own work package, and it is appropriate that we should then bear risk in proportion to our capacity to influence.

At this time, uncertainty exists around the nature, extent and timing of some of the costs associated with the implementation phase 1 enabling projects of SESAR. Also it is possible that further work will be required to complete the process of developing the range and depth of concepts to the extent that they can enter the industrialisation phase during the lifespan of the research and development phase. It may be that NERL, and other SJU members, would be required to provide additional effort above that originally committed for the research and development phase. This risk would not be appropriate for NERL to take on as it would be outside our control. Therefore, we would seek a realistic outcome whereby the incentives we face through the CP3 settlement match our ability to control costs. Therefore, if there are any additional operating costs required resulting from such unplanned aspects of the SESAR initiative, we would expect that these costs to be treated as a cost pass through.

Similarly, EGNOS certification and signal continuity is one of the building blocks of the SESAR concept and our participation in this programme may have unpredictable costs that should be considered for pass through.

In summary, we support a modified middle course approach whereby accounting capital would enter the regulated asset base with an allowable return. Any project operating expenditure would attract a revenue allowance with the potential for increases or decreases if costs widen or fall beyond certain parameters. This would avoid any perverse incentives to grow initial budget estimates to cover real contingency risk – or in fact, to stop work on a project because of a budget shortfall. We believe that this model mirrors the split of cost classification that would occur if we were developing the SESAR capabilities solely within the UK and under the long term capital investment plan, within the current CP2 model.
Q.11. Do respondents agree that the CAA’s approach described above represents a workable approach for the medium term, which is sufficiently flexible to accommodate currently foreseeable change?

It is important that the CP3 regulatory framework and licence is sufficiently flexible to deal with any further evolution of FABs. We request that the CAA is clear about the criteria by which to judge whether the implications for the structure of regulation due to changes as a result of FAB developments are sufficient to reopen the CP3 revenue control. We will continue to inform the CAA on FAB progress throughout the CP3 period.

Q.12. What are respondents’ views on the balance of incentives facing NERL and the potential risks to users in the development by NERL of new products?

Q.13. What are respondents’ views on the regulatory incentives and/or constraints which might be placed on NERL during CP3 in this respect?

There are limited financial incentives currently for NERL to innovate and offer new products and services to our customers. Allowing benefits derived from the development of new products to be retained by NERL and have them sit outside the regulatory single till, will ensure that we are correctly incentivised to innovate and develop new services lines in line with our customers’ needs.

We are willing to work with the CAA to ensure that the regulatory settlement protects our customers from any perceived risk of NERL earning “double returns” on these services, and other potential perverse incentives.

Q.14. Do respondents have any other views on the scope issues raised in this chapter, or on questions on scope which have not been covered here?

There are a number of points that we believe are not covered or covered insufficiently in the CAA’s consultation document:

- The CAA’s CP2 decision addressed the issue of funding pension costs and the allocation of risk between NERL and our customers. In mitigation of the significant costs and risks of the existing pension scheme, we have been working over the last three years in a careful and measured way with our staff, and jointly with the trade unions (“NTUS”), to introduce lower cost and risk pension arrangements. The aim has been to achieve this by agreement, in a way that minimises the risk of formal or informal industrial action with resulting significant financial cost and disruption to customers, the industry and the travelling public. In December 2008, a majority of union members supported the joint NATS/NTUS proposals and we expect to introduce new lower cost and risk arrangements from early 2009. This will include a new defined contribution scheme and controls over the cost of the existing scheme via capping increases in pensionable pay for 15 years at RPI+0.5%. While we have been successful in agreeing these pension reforms, significant legacy cost and risk remain, and we would welcome working with the CAA to investigate and identify potential mechanisms that allow their effective treatment and risk mitigation in CP3 and beyond.
Regarding the issue of incentive pricing of services discussed in paragraphs 6.77 to 6.82, we welcome the CAA’s commitment to clarify the legal constraints on our ability to differentiate prices by early 2009.

We do not agree with the CAA’s preliminary view that the impact on our costs or delay performance arising from the increased traffic envisaged throughout the period of the Olympics and Paralympics is likely to be limited. The experience of other countries that have hosted the Olympics has shown that traffic can increase by anything up to 50% during the Olympic period, although a 20% increase is more common. The overall traffic increase is not the only issue. The increase in movements in the South East of England leading up to and after the opening of the Olympics will present a large increase in demand in what is already congested airspace. Additional complexity, and hence controller workload, is anticipated from a significant growth in business jet and provincial airport traffic. Further, NERL is likely to bear additional costs relating to security measures arising from any enhanced policing of the skies around London. Therefore, we believe that the cost impact will be significant, while the benefits, in terms of additional revenues from route charges, will be more limited in time and scope due to the nature of the traffic. We request that further consideration be given to making appropriate allowance for the additional traffic, costs and service quality impact and would be happy to discuss specific proposals.

The CAA has not considered in its consultation paper the potential cost implications for NERL arising from any required airspace change proposals arising from the development of a new runway at Stansted and/or Heathrow, or possibly Gatwick, or arising from change in ownership at some BAA airports. As environmental issues and concerns increase in profile, we are experiencing more difficult and lengthy consultations on all airspace changes – a responsibility for which NERL currently bears the full risk. If a new runway is to be developed at one of the London airports, then we envisage that the scale, and hence cost of public consultation on the necessary airspace change proposals, will be very significant. Expenditure on the TC North airspace change consultation has already cost NERL close to £1m. We consider that the costs of consulting on airspace changes required as a result of a new runway in London are likely to be significantly higher, due both to the greater number of people to be consulted and the likely sensitivity of the environmental impact. Therefore, we believe that it is unreasonable for NERL to bear the full risk for the cost of consultation and suggest that these costs should be borne by the CAA.

Ofcom is currently undertaking a consultation on the use of Administered Incentive Pricing (“AIP”) to improve the efficiency of spectrum use in the aeronautical sector. In response to Ofcom’s consultation, we have highlighted our serious reservations about the applicability of AIP in the UK aviation sector at this stage, particularly on a unilateral UK-only basis. International and technology constraints mean there is currently limited scope for NERL to provide aeronautical radar, navigational and communications services through alternative technologies. Hence, at the current time, the introduction of AIP on a unilateral basis is unable to incentivise efficiencies and has the potential for unintended consequences that may erode safety. Should Ofcom introduce AIP, with associated costs that are likely to be material but are not yet known we would press for these to be treated on a pass through basis and seek their full remuneration via the CP3 revenue control.

We agree that it may be appropriate for the CAA to revisit the 3% limit on unregulated activity. We understand that the 3% cap was put in place so that
NERL would not divert assets away from the provision of Core and Specified services, to the detriment of financial stability and service quality. However, we consider that there are now sufficient licence controls in place to ensure that we continue to be financially stable and maintain a high service level. Regarding financial stability, we have taken a number of steps to enhance our financial robustness, including ensuring that we have access to long term funding to finance our long term assets, diversifying our debt portfolio and reducing the costs of the company’s borrowing. We are already incentivised to maintain or improve service quality through the delay term in the allowable revenue formula.

Therefore, in view of the Better Regulation principle of proportionality, we believe that the licence limit on non-regulated business is no longer appropriate. We propose that non-regulated business revenue could remain within the single till. This would mean that revenue from non-regulated sources would continue to offset and reduce the unit rate, but at the level of business projected to be achieved in the control period. However, the amount of reduction of the unit rate would not be limited to 3%, as is currently the case. In order to set expectations, we could provide the CAA with a forecast of non-regulated business revenues for the CP3 period, to allow the regulator to appropriately set the revenue cap for regulated business.

- Given the possibility of deflation occurring and the impact that this would have on the price control, we would ask the CAA to consider an RPI ‘collar’ which is non negative on the control settlement thereby preventing the unit rate from being deflated other than by the X factor. Much of our cost base is fixed in the short term, which prevents us from adapting to a downturn in traffic as quickly as some of our customers can. When faced with a traffic downturn we have limited opportunities to make corresponding cuts in costs as we operate an open access system 24/7 to prescribed standards, without the ability to close airspace and to make reductions in labour costs proportionate to reductions in traffic. In addition, a high proportion of our costs are staff costs. It is unrealistic to imagine deflation of wages other than for a very transient period. We operate in an environment whereby we could lose staff to other ANSPs (e.g. to other EU member states, the Middle East or Australia etc), if we attempted to implement real wage cuts in the face of deflation. We recognise that our regulatory situation is different from the usual European full cost recovery model for ANSPs, whose charges are not subject to such a strict shadowing of the inflation rate. We are willing to work with the CAA to discuss options to address the issue of deflation.

Q.15. The CAA invites views on its provisional assessment of the potential interaction between UK economic regulation of NERL and the proposed SES II performance regime.

We fully support the new SES II performance framework which should deliver benefits to airline customers across the EU. However the Regulation still has not been finally adopted. Over the next two years, subsequent Implementing Rules will be agreed, which will set the detail. Thus, at this stage, while the key principles are known, the detail of how the new performance framework will operate, which key performance areas (“KPAs”) will be covered in the CP3 timeframe, what key performance indicators (“KPIs”) will be used, and how the incentive/disincentive scheme will be applied, is not available.

We agree with the CAA (para 7.29) that the existing system of incentive based economic regulation for NERL makes the UK well placed to respond to the new
SES II performance framework. We intend to work closely with the CAA in inputting ideas to the EU process so that the UK experience can help shape a framework which delivers benefits to customers across the EU, and fits the NATS business model.

We share the CAA goal (para 7.2) of effectively submitting the NERL CP3 metrics and targets as a substantial element of the UK En-route SES II performance plan. However, we consider it possible that there will be more divergence between the current UK system and the SES II framework than the CAA assumes, as indicated in the bullets below. This could make managing the interaction more complex. From our point of view, it is imperative that we face a single, coherent set of targets and incentives, based on agreed and consistently measured performance metrics. Significant inconsistency between CP3 and SES II targets could create perverse incentives, which at best, may prevent improvements in performance.

The possible divergences between the current UK system and the SES II framework include:

- The scope of SES II (as set out in the current draft Regulation) is broader than merely en-route services. With the focus on “gate-to-gate” performance improvements, its implementation may well extend to terminal, aerodrome and airport provided services. This means that the National Performance Plan which the CAA will have to draw up, would need not only to cover NERL but also providers of ATM terminal services such as NATS (Services) Ltd ("NSL") and others who provide services at UK airports, including the airports themselves, who through the provision of ground based airport infrastructure can have a significant influence on gate-to-gate performance. Explicit consideration will then also need to be given to the impact of actions of other players (e.g. airport operators and airspace users in setting airport capacity declarations) on gate-to-gate ATM performance, as well as other factors such as the disclosure of commercial information in contestable parts of the market;

- Functional Airspace Blocks (FABs). The SES II Regulation provides impetus to the creation of FABs and foresees that in due course performance targets will be set at FAB level. Indeed the UK/Irish FAB is already taking steps to measure performance against PRC metrics at a FAB level – for example delays and flight extension. It is possible that this will become a significant factor, during the CP3 period. While FAB level performance measurement should not prevent UK-specific targeting, it could reveal significant improvement opportunities, which may not be incentivised through a UK-only measurement;

- Potential differences in KPA coverage. While we agree with the CAA that the CP3 regime should anticipate as far as possible the scope of SES II performance standards, this may not be possible in all four areas of safety, environment, capacity and cost-efficiency. For example, performance metrics for environment/flight efficiency are still immature. Over the last year, we have been developing possible environmental and fuel efficiency measures, in partnership with our customers. However, at this stage we believe that these potential measures are not yet mature enough to be used for performance incentivisation, particularly as we do not have a record of historic performance, to understand their interaction with other metrics. We therefore believe that they are best used for performance reporting, rather than incentives targets, during CP3. We also have strong doubts about regulatory (i.e. financial) incentives for safety. Safety metrics therefore, we believe at European level are still immature – and there are difficulties related to the absence of “Just Culture” in some
member states. So for these two issues alone, we do not think it is possible, as per para 7.31 ii) to “…ensure NERL faces regulatory incentives in all the Key Performance Areas”.

- Potential differences in KPI definitions. Even where the same KPAs are covered by both SES II and CP3, it may be difficult to align the metrics to achieve a consistent incentivisation, given current CP2 metric definitions. In the case of delay performance, already the current CP2 weighted average NERL-attributable planned ATFM delay per flight diverges significantly from the PRC measure of Average summer ATFM delay per flight. Also in this area, we are working actively with customers to review performance measures.

Q.16. The CAA invites views on its proposed approach to the scope and conduct of the CP3 review, which seeks to align as far as possible the outcome of the CP3 review with the requirements on the UK which are likely to stem from SES II.

We believe that the UK should welcome the SES II Performance Framework and we agree that CP3 should, as far as possible, anticipate the SES II framework. However, we believe SES II may diverge significantly from CP3 in terms of scope, coverage and detail, as discussed above. This leads us to be less confident than the CAA, that CP2 performance can be mapped across to prospective SES II metrics.

Given the uncertainties over how the SES II framework will develop and the need for NERL to be subject to a single, coherent set of targets we therefore believe that it would be imprudent for the CAA not to build into CP3 a possible re-opening mechanism, as outlined in paragraph 7.31 iii) given clear pre-defined triggers and boundaries. This will enable the CP3 service standards to be adjusted, if necessary, to ensure they are aligned with SES II.

Q.17. The CAA would therefore welcome views on the relative weight that should be attached to the two objectives set out above.

NERL acknowledges that efficient financing and ensuring financial robustness are both important dimensions of the CAA’s regulatory regime.

However, we would place relatively more weight on ensuring the financial structure is sufficiently robust so as not to put at risk the progress of its investment programme, the operation of the business and/or the delivery of service quality to its customers. Financial robustness is especially important given that the Airline Group, NATS’ Strategic Partner, is a consortium of airlines whose financial performance is correlated to NERL’s (i.e. it is likely that if NERL is facing financial distress in a market downturn, then airlines will be in a similar position). Financial robustness is also important for maintaining the long term investment programme to ensure that customers benefit from increased capacity and service quality improvements. This is important given the relatively long lead times for reducing and subsequently increasing capacity in the ATM business compared to lead times for our customers.

The very high gearing level at the time of part privatisation combined with NERL’s exposure to 100% traffic volume risk and high proportion of fixed costs, made the company particularly vulnerable to the traffic reductions which followed in the wake of the events of 9/11. This in turn led to a significant curtailment of our
investment programme and to diversion of management time over a period of 18 months to put in place a comprehensive economic regulatory and financial restructuring.

Since the Composite Solution (as it came to be known) was implemented in March 2003, the company has successfully followed a strategy designed better to meet the objectives of efficient financing and to maintain financial robustness. Hence in August 2003, the company replaced the residual £600m bank loan put in place at the time of the PPP with an amortising 5.25% £600m bond with a final maturity of 2026, £200m of which was swapped from fixed rate to a rate linked to the movement in RPI. This has also improved the financial robustness of the company by ensuring that we had access to long term funding to finance our long term assets, with our debt portfolio diversified by both source and maturity.

Financial robustness has been further enhanced by reducing the costs of the company’s borrowings. Thus in November 2005 we renegotiated our existing bank facility (due to expire in 2008) with a new five year facility capable of being extended for a further two years at reduced margins compared with the previous facility. In the last twelve months we have taken further action to improve the efficiency of our financing arrangements by repaying shareholder loan notes put in place in March 2003 that bore interest at 11.3575% from free cash within the company.

While both efficient financing arrangements and financial robustness are important, the company believes that, on balance, the CAA should give greater weight to the latter. Ensuring that we remain financially robust has been a cornerstone of our strategy since 2003, as evidenced by the fact that we have reduced our gearing (net debt to RAB) from 86% as at March 31st 2003 to 58% as at September 30th 2008. Over the same period our credit rating has improved from A-/Baa1 to A+/A2 and it is the company’s intention to maintain a solid investment grade of at least A-/A3 in the future by maintaining a gearing ratio of between 60-65% net debt to RAB.

**Q.18. Do respondents agree that the two alternative approaches are as set out above; or are there any other approaches to the regulation of finance?**

**Q.19. Do respondents agree that the CAA should pro-actively regulate NERL’s financial arrangements via licence conditions?**

We agree with the CAA’s assessment that there are broadly two ways of achieving an appropriate financial framework for CP3, namely through regulating our financial arrangements via licence conditions or through an incentive based approach.

In view of the essential nature of the service provided by NERL and the relative high cost and risk of service disruption to customers, industry and the travelling public in the event of financial failure, we support the CAA’s preferred approach of regulation through licence conditions.

We believe that the actions we have taken since 2003 to strengthen our financial position and reduce our gearing, demonstrates the effectiveness of the CAA’s current approach and that no further regulation is necessary.

In our opinion, the alternative incentive based approach is a relatively blunt instrument and lacks the same efficacy as the approach preferred above. This is
because the company’s risk profile is such that there are limits to the strength of the financial incentives that reasonably can be applied.

In summary, we believe that the CAA should continue proactively to regulate the financial arrangements of the company and to enforce this through the licence rather than relying purely on financial incentives.

Q.20. The CAA invites views on what, if any, changes should be made to the existing licence regime.

Under the Composite Solution our licence was modified to introduce tighter controls over our financial arrangements. The CAA currently has powers under Condition 5 of our licence, namely the requirements that we:

- act at all times in a manner calculated to ensure that we have sufficient resources to comply with our obligations under the Transport Act and the licence;
- restrict our activities to “permitted purposes”;
- notify the CAA if we consider that there is likely to be an increase in our gearing; and
- notify the CAA if we amend our financing arrangements.

Additionally, we are required to seek CAA consent if we put in place borrowing facilities containing new security arrangements or cross default provisions. We believe that these provisions are sufficient to prevent inappropriately high leverage and that further changes to our licence are not necessary to enable the CAA to fulfil this goal.

We believe that the current arrangements are adequate and no additional reform is required.

Q.21. Do respondents agree that CAPM should form the principal means of estimating the cost of capital?

As recognised in the CAA price control proposals in respect of Stansted Airport, there are shortcomings in the Capital Asset Pricing Model (“CAPM”). However, we agree that the CAPM is the preferred methodology for the estimation of the cost of equity, since it offers the basic conceptual framework for understanding the determinants of returns on an asset. It is also modest in its data requirements, involving few explanatory variables and parameters, each with a clear economic interpretation.

Further, continuing to adopt the CAPM would ensure consistency with the CAA’s past approaches. Alternatives to the CAPM such as the Arbitrage Pricing Model (“APM”) and Fama-French (“FF”) have yet to be fully tested in the regulatory context, are more data intensive and computationally complex. We do not feel that these models are unambiguously better than the CAPM, and should not supplant the CAPM at this time.

We note, however, that in the current environment many of the market-driven data-points (e.g. betas, gilt yields etc) are likely to be distorted given the unprecedented levels of volatility and uncertainty. Therefore, other models should be used as a cross check, where relevant, reliable and appropriate.
While the CAPM is the preferred methodology for estimating the cost of equity, the CAA should be aware that the CAPM-cost of equity is likely to understate the true cost of equity because the CAPM assumes that expected returns are symmetrically distributed. In practice, however, our expected returns might be asymmetrically distributed through risks of traffic downturn caused by political events, including war (2003), terrorist action (2001) or international health events, such as foot and mouth (2001) and SARS (2003/04) or because of our regulatory framework.

The appropriate regulatory treatment of this asymmetry would be to increase the allowed return on investment to an amount greater than the systematic cost of capital, by the addition of a “regulatory risk premium”. We request the CAA to give further consideration to this point.

Q.22. Do respondents agree that the approach to the market equity risk premium, analysis of beta and the non-zero debt beta provide will be relevant considerations in the CP3 review?

Risk-free rate (“RFR”) and equity risk premium (“ERP”)

In relation to the risk free rate and the equity risk premium the CAA states (p109) that:

“Given that [the ERP and RFR] parameters are generic to all CAPM estimates of the cost of capital, and that the proposals were aligned with the most recent assessment by the CC, it would seem credible to argue that there is a strong case for adopting the same estimates [updated in light of the CC’s report on Stansted Airport] for the CP3 NATS review (subject to a high level check to confirm that the risk-free rate allowance continues to be appropriate).”

We strongly disagree with this statement since:

- As explained in the appendix, in the current unprecedented and volatile market conditions a RFR of 2% which appears to have been determined by looking selectively at short-term trends is completely inappropriate. We still believe that due consideration should be given to estimating the RFR based on nominal gilt yields and swap rates. If the CAA is still minded to use index-linked gilt (“ILG”) yields as the basis for determining the RFR it should look at longer-term trends possibly over the last 20 years; and

- It overlooks the criticism that has been directed towards the CC’s ERP estimates for Heathrow / Gatwick, which were not subsequently fully reflected in the CC’s Stansted decision. In particular, the CC’s ERP estimate is too low, based on geometric means of historic returns (instead of arithmetic means), adjusts for an “equity premium puzzle” that is no longer relevant, and is out of step with regulatory precedent.

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5 See, for example, Myers (2008), Schaefer (2007)
Given the conjecture surrounding the CC’s estimates we strongly encourage the CAA to independently assess each of the CAPM parameters from first-principles, rather than rely on “a high level check”.

**Asset beta**

The CAA indicates that it intends to undertake comparators analysis to identify NATS’ asset beta, possibly supplemented by bottom-up modelling.

Although we broadly agree with this contention, we urge the CAA to consider the following points:

- **Asset beta estimates for BAA airports from the recent CC reviews are relevant, but should not be afforded undue weight. In particular, we note that the CC’s recent decisions were based on (BAA stock price) evidence that will be more than three years old by the time the CAA publishes its initial proposals. Given today’s volatile markets the CAA should ensure the relevance of beta estimates from a dramatically different set of market conditions.**

- **A rigorous relative risk analysis should be carried out that considers (among others) demand and revenue risks, operating leverage, input price risks, country-specific risks and differences in regulatory regimes (where relevant). We encourage the CAA to consider evidence from utilities, airports and airlines in determining appropriate comparator benchmarks and note that asset betas for infrastructure companies have increased significantly over the last year. In this regard we note that the CAA may wish to adopt the CC’s estimates of asset betas for various sectors. However, the CC’s analysis of asset betas for other industries was not rigorously explained, while no detailed relative risk analysis was offered in support of the hierarchy of asset betas presented. As such, the CAA should rely on first principles analysis instead.**

- **Regulatory precedent on asset beta - both domestic and international - may form a useful input to the CAA’s assessment: the range of regulatory decisions for different types of entities may assist the CAA to corroborate its relative risk analysis and, independently, provide insights into an appropriate asset beta for NATS relative to other UK regulated entities.**

- **The CAA should have regard to whether our risk has changed since CP2, or, put differently, whether there is any reason to adopt a different asset beta at CP3. This analysis would likely be based on analysis comprised within the detailed relative risk analysis proposed above, but should closely consider what (if any) changes to our regulatory framework are proposed and whether these (if any) have any bearing on our systematic risk. The CAA should only set a different asset beta if there is compelling evidence that our systematic risk has changed.**

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8 The lower end of the CC’s (2007) ERP range of 2.5%-4.5% is less than every single UK regulatory decision this millennium.
Debt beta

The CAA states:

“In light of the airports review decision, it is likely that it will be appropriate to use a non-zero debt beta assumption.”

... “[t]he CAA adopted an assumed debt beta of 0.1 ... it is likely that a similar assumption will be appropriate to avoid setting an excessive cost of equity allowance.”

We strongly disagree with these statements.

- The statements, at best, pre-empt the outcome of analysis of our debt beta, or, foreshadow that the CAA does not regard NERL-specific analysis as necessary. On the latter point, it seems necessary to us that updated NERL-specific analysis is required even if the CC’s (disputed) methodology is adopted. This is because the components of the CC’s debt beta analysis – the debt premium, liquidity premium, default premium and the market risk premium – are yet to be determined. We note that at least two of these components depend on the credit rating assumption, which is also yet to be determined.

- The CC estimates a non-zero debt beta using a decomposition methodology, whereby the debt beta is determined by reference to the four components listed above. There are several possible objections to this methodology:
  
  o The debt beta could be estimated by an OLS regression of returns on debt against an appropriate market index. We believe that this methodology is favoured by a considerable proportion (if not majority) of academics and practitioners. Such a regression could focus upon our debt, an analysis of our comparators, or by reference to an index of bonds with similar ratings to our debt.

  o The CC’s estimates of the components of the decomposition formula it adopts, are challengeable. In this regard we note that even the CC has been unable to settle on a consistent methodology, the approach for the Stansted review differed from the methodology at the earlier Heathrow / Gatwick review for a number of parameters. In particular:

    ▪ The treatment of transaction costs and the appropriate determination of the risk free rate within the debt premium calculation;
    ▪ The appropriate period and sources for estimating the liquidity premium; and
    ▪ The MRP estimate used for Stansted was toward the top of the range, while for Heathrow / Gatwick it was the mid-point of the range despite a figure toward the top of the range being used in the actual WACC calculation.

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9 See, for example, Myers (2007) and Schaefer (2007)
Q.23. Do respondents agree with the CAA’s initial thoughts on the cost of capital as set out above? What other factors should the CAA take into consideration?

Gearing

The CAA states:
“[i]t is likely to be appropriate to continue to set the cost of capital according to the actual financing structure that the company is expecting to adopt during CP3.”

We broadly agree with this statement.

Taxation

The CAA states:
“It is therefore likely to be appropriate to retain an effective tax rate approach for NATS during CP3.”

We broadly agree with this statement. A consistent approach to taxation, as recognised by the CAA at CP2, has a very high value: our customers have previously benefited from efficient financing techniques that minimised tax liabilities and enabled the CAA to set a lower pre-tax cost of capital. That benefit was realised, however, in the knowledge that our future tax liabilities (i.e. effective tax rate) would (eventually) increase since continual out-performance of the statutory tax rate is impossible. As such, the use of an effective tax rate previously amounted to an implicit regulatory contract. A failure to recognise NATS’ full (efficiently incurred) tax liabilities at CP3 (and beyond) would, in turn, lead to an increase in regulatory risk and the ultimate rate of return required by investors.

Cost of debt

The CAA states that it:
“[c]an see merit in ... allowing for the embedded costs of debt (in line with NERL’s actual cost of debt) [with] and allowance for new debt to be issued in CP3 in accordance with information on market rates for a given credit rating.”

We broadly agree with the CAA’s assertion that the cost of existing debt should be assessed differently from the cost of new (and refinanced) debt given the stark differences between current and (recent) historic market conditions. However, we do not agree with the assertion that an embedded debt adjustment should be made. Rather, the CAA should estimate the cost of our existing debt by focusing upon historic benchmark yields (as opposed to actual embedded debt costs). The use of benchmark yields continues to provide NERL with an incentive to outperform the average benchmark yield over the interest rate cycle, the benefits of which will eventually feed through to customers. By contrast, setting our historic cost of debt equal to our embedded debt costs removes any incentive for NERL to finance ourselves efficiently. Inevitably such an approach relies upon regulatory intervention in the financing decisions of the regulated entity, a situation which is manifestly inefficient and undesirable (even assuming the regulator was sufficiently resourced to be able to intervene).

We further note that the CAA’s proposed methodology is inconsistent with the justification it provided for the embedded debt adjustment at CP2. In particular,
we note that the CAA’s consultants – upon which the CAA heavily relied for the cost of debt estimate - recommend an (additional) allowance for NATS’ actual cost of debt since “this reflects the unique conditions faced by NATS at the time of the Composite Solution which are likely to mean NATS was unable to raise finance at a cost consistent with its credit rating at that point in time”. The key justification, therefore, for the embedded debt allowance at CP2 was that the high existing cost of debt was beyond management’s control. This pre-condition is no longer relevant at CP3 since all finance associated with the Composite Solution has been subsequently efficiently refinanced. As such, we are entitled to reap (bear) the benefits (costs) of our financing decisions. We note that the CAA’s proposals elsewhere - by indicating that the cost of new debt should be assessed by reference to market benchmarks - implicitly accept that we should keep (pay for) any out- (under-) performance of an appropriate benchmark. A similar approach should be taken for our existing debt costs.

The CAA states that the cost of debt should include “an allowance for new debt to be issued in CP3 in accordance with information on market rates for a given credit rating”.

We agree that this should be the case but strongly believe that the CAA should give due consideration to the fact that, as previously stated, the world is facing its worst financial crisis for decades with the result that the cost of issuing new debt has increased substantially. In its Stansted proposals, the CAA stated that in the period from September 12th (the cut-off point for the CC’s Stansted report) to November 17th the redemption yields on benchmark A and BBB rated corporate bonds had risen by only 7 and 12 bps respectively to 6.42% and 6.94%. As the increase in yields was ostensibly small, the CAA did not consider it sufficient to warrant a change in the overall estimate of the cost of capital proposed by the CC. We believe that yields in this period have risen by considerably more than indicated by the CAA as evidenced by the increased spread payable on our existing £600m bond which has risen from 195 bps on September 8th to 312 bps on November 24th (the spread on December 8th was 335 bps) and further evidenced by estimates of the cost of issuing new debt, received from our major relationship banks. Thus, on September 9th the cost of issuing a 25 year fixed rate bond was estimated to be 6.625% reflecting a re-offer spread to the benchmark gilt of 200 bps. However, by November 25th the estimated coupon had risen to 9.125%, representing a 450 bps spread over the benchmark gilt. We also note that the benchmarks used by the CAA appear to reflect yields available in the secondary market which ignores the fact that there is now a substantial premium (c+100 bps) associated with new bond issues.

In its Stansted report the CC stated that “the CAA might need to consider adjusting our estimates if there is a significant re-pricing of long-term risk which could affect the variable element of the cost of debt”. We believe that such a re-pricing has occurred; the CAA should reconsider the benchmarks by which it measures the cost of debt to ensure that they are truly reflective of current market conditions.

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10 See PwC (November 2004) "NATS – Cost of Capital for CP2", p38.
APPENDIX

Q.22. Do respondents agree that the approach to the market equity risk premium, analysis of beta and the non-zero debt beta provide will be relevant considerations in the CP3 review?

Risk free rate

The CC stated that its preferred way of obtaining a RFR was to consider the yields on shorter maturity index-linked gilts ("ILG"). In its Heathrow and Gatwick review for Q5 issued in September 2007, the CC chose a value of 2.5% for the RFR based on an analysis of 5 and 10 year ILG yields having concluded that long-dated ILG yields were an unreliable indicator of the RFR. In its Stansted review, the CC concluded that, based on latest evidence, the 10 year ILG benchmark was also an unsuitable benchmark. It cited the fact that the gap between nominal and ILG yields implied that the market priced in a 2.7% year-on-year inflation rate during the next 5 years but a 3.3% year-on-year inflation rate over the next 10 years which “did not feel plausible” in an era of inflation targeting. In the current climate, we would argue that it is now quite plausible that inflation will rise in the longer-term as a result of the UK government’s short-term initiatives to kick-start the economy. The CC then proceeded to analyse 3 and 5 year gilt yields over the next 10 years but chose to focus on yields post-2001 in determining that “the RFR rate in recent years has been approximately 2.0% and that this rate would be an appropriate assumption to use for the rest of Q5”.

In its Stansted Price Control Review, the CAA noted that there had been “a significant increase in [3 and 5 year ILG] yields” since the CC formed its view “which might suggest that the RFR has, if anything, increased”. However, the CAA chose to ignore these movements on the basis that they were short-term and did not “warrant adjusting the Commission’s estimate of the RFR as this was based on longer-term trends”. We believe that this argument is flawed in that it inherently assumes that recent movements are abnormal and that yields will revert to the levels seen since 2001 which, by inference, the CAA deems to be more “normal” levels. We believe that there is no evidence to support the belief that yields post-2001 represent “normal” levels and there is a strong argument that the last few years were unusually benign in terms of risk-premia reducing. In our view, this is likely to mean that risk should be re-priced. The company therefore believes that in the current climate a RFR of 2% determined by looking selectively at short-term trends is completely inappropriate. If the CAA is still minded to use ILG yields as the basis for determining the RFR it should look at longer-term trends possibly over the last 20 years.

Yields on index-linked gilts have been widely recognised – including by the Bank of England and the Competition Commission itself - as downwardly biased due to the introduction of pension and accounting reforms.11 We would therefore

11 The effect of actuarial and regulatory requirements was originally noted by the Bank of England in 1999:

"The Minimum Funding Requirement led to strong institutional demand for ILGs. The combination of strong and rather price-insensitive demand (largely from pension funds) with limited supply, has pushed real yields down, perhaps more than in the conventional gilt market. Consequently, real yields in the ILG market may not be a good guide to the real yields prevailing in the economy at large" (Bank of England (1999) Quarterly Bulletin, May).

Recent commentary by the Bank of England indicates that this effect is still prevalent:

"... strong pension fund demand for inflation-protected bonds has pushed down their yields …this demand may reflect several regulatory and accounting changes [FRS17, IAS19] over
encourage the CAA to consider alternative methods of estimating the real risk free rate based on nominal gilt yields and swap rates. On the former we note that there is evidence to suggest gilts may also have been biased by pension and accounting reforms,12 while there is academic support for the use of swap rates (adjusted for inter-bank risk) as a measure of the risk free rate.13


12 See, for example, the Debt Management Office (2002) "Annual Review 2001-02", which acknowledged the potential for this spill-over of pension fund demand into the gilt market following the introduction of FRS17. This spill-over is widely acknowledged to have been driven by the same pension reforms that have driven down yields on ILGs. For instance, the UK Competition Commission (2006) "Cost of capital for UK home credit providers" has stated:

"Other relevant factors for the downward trend in yields in recent years include the minimum funding requirement for pension schemes, which increased the demand for both conventional and index-linked government securities and thereby placing upward pressure on their prices."

Likewise, market commentators (see, for example, Financial Times (17/02/06) and Financial Times (16/02/06)) have also acknowledged the impact of pension reform on nominal gilts:

"While real yields on inflation-linked bonds have been squeezed - and have been the subject of most comment - nominal yields on conventional gilts have also collapsed."