NATIONAL AUDIT OFFICE

The Refinancing of the Norfolk and Norwich PFI Hospital: how the deal can be viewed in the light of the refinancing

REPORT BY THE COMPTROLLER AND AUDITOR GENERAL | HC 78 Session 2005-2006 | 10 June 2005

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LONDON: The Stationery Office
£7.75

Ordered by the
House of Commons
to be printed on 6 June 2005

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This report has been prepared under Section 6 of the National Audit Act 1983 for presentation to the House of Commons in accordance with Section 9 of the Act.

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23 May 2005

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CONTENTS

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SUMMARY

1 The Norfolk & Norwich University Hospital NHS Trust (the Trust) currently pays £37.8 million a year to a private sector consortium Octagon under the terms of one of the first PFI hospital contracts let in January 1998 **(Figure 1)**. The contract was a pathfinder deal which helped the Department of Health (the Department) to establish a new market in PFI hospital procurement.

2 The Trust's 1998 contract required Octagon to build the new hospital, to then maintain it and provide facilities management service for a minimum period of 30 years. The current contract also reflects additional building work that the Trust commissioned from Octagon in 2001, the cost of which was fully offset by a subsequent price reduction following a refinancing completed by Octagon in 2003. The minimum period over which facilities management services will be provided by Octagon was extended to 35 years at the time of the refinancing. The total minimum contract period, including the construction phase, which had initially been for 34 years, then became 39 years to 2037.

3 Octagon's refinancing in December 2003, nearly six years after the letting of the contract and two years after the opening of the new hospital, generated large gains for Octagon, part of which were shared with the Trust **(Figure 2 overleaf)**. The large refinancing gains arose because, having successfully delivered the new hospital, Octagon was able to obtain better financing terms, not available when the 1998 contract was entered into, as a result of the maturing PFI market and also the reduction in general interest rates which had arisen since 1998.

4 In common with other early PFI deals, this early PFI hospital contract had placed no obligation on Octagon to share any refinancing gains. A subsequent agreement by Octagon to share with the Trust refinancing gains, on additional borrowings funding the further work which the Trust commissioned in 2001, had been limited to allocating the Trust 10 per cent of these refinancing gains. On refinancing in 2003, Octagon shared, however, approximately 30 per cent of its total refinancing gain with the Trust **(Figure 3 overleaf)**. This was in accordance with the voluntary code for sharing refinancing gains on early PFI deals which the Treasury had negotiated with the private sector in 2002.

1 Payments under the PFI contract in relation to the Trust's budget: 2004-05

	£m	%
Revenue	269.0	
Outgoings:		
PFI contract	37.8	14
Other expenditure	231.2	86
	269.0	100
Surplus[1]	–	

Source: The Trust

NOTE

1 The Trust's revenue and expenditure for 2004-05 are based on unaudited information at 4 May 2005. In 2003-04 the Trust achieved a surplus of £0.9 million due to the receipt of non-recurring income of £3.4 million.

2 Gains to Octagon shareholders arising from the refinancing

Expected net present value of returns to Octagon shareholders over contract period	£m[1]	Internal rate of return (IRR) to Octagon shareholders[2]
At contract letting	**47.3**	**18.9%**
Decrease up to time of refinancing	(11.9)	
Prior to the refinancing	**35.4**	**15.9%**
Increase from refinancing[3]	115.5	
	150.9	
Refinancing gains shared with Trust (Figure 3)	(33.9)	
Following the refinancing	**117.0**	**60.4%**

Source: Royal Bank of Canada, the Trust's financial advisers on the refinancing (from Octagon records)

NOTES

1 Figures expressed as net present values based on cashflows discounted at 18.94 per cent in nominal terms, the anticipated base case internal rate of return (IRR) to Octagon's shareholders as reported by Octagon when the contract was let. The base case IRR is used as the discount rate for the evaluation of refinancing gains in accordance with the voluntary code and related Treasury guidance. The base case IRR is not necessarily the discount rate that Octagon's shareholders would use to evaluate their expected returns.

2 The IRR to shareholders is the standard measure which the public sector has used to compare the returns expected by shareholders of consortia bidding for PFI contracts. It is not an indication of the future rate of annual returns which the investors in Octagon anticipate realising from the project but reflects the time value of when benefits are received including the benefits realised immediately following the refinancing. The increase in the IRR following the refinancing reflects the high value of receiving large returns early in the contract period.

3 The large refinancing gains arose because, having successfully delivered the new hospital, Octagon was able to obtain better financing terms, not available when the 1998 contract was entered into, as a result of the maturing PFI market and the reduction in general borrowing rates since 1998. The refinancing gains of £115 million arose on a project where the capital value of the hospital building was £229 million (equivalent to over £300 million in prices at the time of the refinancing).

4 The shares of Octagon at the time of the refinancing, and at 28 February 2005, were held:

3i Group plc	25%
Barclays Infrastructure Limited	25%
Innisfree Partners Limited	25%
John Laing plc	20%
Serco Investments Limited	5%
	100%

3 Analysis of the Trust's share of the refinancing gain

	Refinancing gain £m	Retained by Octagon £m	Gain shared with the Trust £m	% received by the Trust	Basis of sharing
Extension of minimum contract period	5.0	2.5	2.5	50	Octagon agreed to allocate to the Trust 50 per cent of the refinancing gain which arose from extending the minimum contract period.
Balance of refinancing gain	104.7	73.3	31.4	30	Octagon agreed to allocate to the Trust 30 per cent of the remaining refinancing gain in accordance with the voluntary code for sharing refinancing gains on early PFI deals.
Allocation of refinancing gain for sharing with the Trust	**109.7**	**75.8**	**33.9**	**31**	
Part of refinancing gain excluded from gains to be shared with the Trust	5.8	5.8	–	–	Where the private sector project company has not been achieving its expected internal rate of return then the voluntary code allows the private sector to retain that part of the refinancing gains which will allow the rate of return (before taking account of any refinancing gains) to return to the level expected when bidding for the contract.
Allocation of total refinancing gain	**115.5**	**81.6**	**33.9**	**29**	

Source: Royal Bank of Canada (from Octagon records)

5 In response to issues raised with us by Norman Lamb, Member of Parliament for North Norfolk, we considered:

- whether the large benefits which have accrued to the private sector shareholders as a result of the refinancing indicate that the Trust could have improved the original PFI deal it negotiated with Octagon; and
- how the price the Trust is paying for this deal following the refinancing compares with current PFI hospital deals.

6 In summary we have found that:

i The terms of the original bank finance appear in line with other early PFI deals but subsequent improvements in PFI financing terms mean that, although the Trust has received a share of the refinancing gains, it continues to pay a premium on the financing costs compared to current deals.

ii There are other factors which may affect the overall comparison of the Trust's deal with current PFI deals including the fact that the benefits of a new hospital have been received earlier than in many other communities and the high rates of recent construction cost inflation have been avoided.

iii It might have been possible for the Trust to have improved the original deal with greater competition and better defined requirements in the closing stages but the Trust is not convinced this would have brought added benefits as it sought to close a pathfinder deal which had already been assessed as value for money.

7 Our detailed findings were:

1 The terms of the original bank finance appear in line with other early PFI deals but subsequent improvements in PFI financing terms mean that, although the Trust has received a share of the refinancing gains, it continues to pay a premium on the financing costs compared to current deals

i The terms of the bank finance in the original deal appear competitive for a bank financed PFI deal at that time (paragraph 1.1).

ii The successful delivery of the new hospital and the maturing PFI market have enabled better financing terms to be obtained on the funding in place prior to the refinancing producing a £34 million gain (paragraph 1.2).

iii Octagon has been able to generate further refinancing gains of £81 million from the improved market for financing PFI hospitals and lower general interest rates, mainly by increasing its borrowings and accelerating its shareholder distributions (paragraph 1.3).

iv The Trust is receiving both benefits from the refinancing in accordance with the new code and also new risks but has assessed the overall effect of the refinancing as value for money (paragraph 1.4).

v After sharing in refinancing benefits NHS Trusts continue to pay a premium on the financing costs of early PFI hospital deals compared to current deals (paragraph 1.5).

2 There are other factors which may affect the overall comparison of the Trust's deal with current PFI deals including the fact that the benefits of a new hospital have been received earlier than in many other communities and the high rates of recent construction cost inflation have been avoided.

i There are a range of factors, some of which have yet to be fully analysed by the Department, which will have affected the pricing of current PFI hospital deals compared with early PFI deals (paragraph 2.1).

ii One significant factor, construction cost inflation, has been much higher than general inflation in recent years (paragraph 2.2).

iii The Department has demonstrated that, if no other savings are priced into a current bid, then the additional building costs arising from construction cost inflation probably offset the benefit of the lower financing costs which are now available (paragraph 2.3).

iv The Trust and the local community have received the benefits of a new hospital earlier than many other communities (paragraph 2.4).

3 It might have been possible for the Trust to have improved the original deal with greater competition and better defined requirements in the closing stages but the Trust is not convinced that this would have brought added benefits as it sought to close a pathfinder deal which had already been assessed as value for money

i The Trust's approved business case assessed this early PFI hospital deal as value for money when the contract was let in 1998 and when the additional works were commissioned in 2001 (paragraph 3.1).

ii Alternative financing solutions were not seriously explored to ensure the financing terms remained competitive during a two year deal closure, the Trust considering that it did not wish to further delay the project and that it was not convinced that the overall terms of the deal could be improved bearing in mind the relatively undeveloped state of the PFI financing market at that time (paragraph 3.2).

iii The annual charge increased by a fifth in a non-competitive situation due to specification changes, including an increase in the number of beds of over 40 per cent, although the Trust took steps to test through benchmarking that the pricing of this additional work was reasonable (paragraph 3.3).

RECOMMENDATION

8 As the market in PFI hospitals continues to develop, the nature of the deals, and the way that the deals are priced, will change due to a range of factors. The Department should use the information which it collects, in its monitoring of PFI deals entered into by NHS Trusts, to identify the effect that different factors are having on the pricing of deals. This analysis will assist the Department and NHS Trusts in assessing bids for new deals and will be valuable to the Department's existing work in evaluating the progress of the PFI hospital programme. The analysis should include identifying the effect on the pricing of PFI deals of changes in:

a the nature of the deals being entered into;

b general economic factors such as construction cost inflation and commercial borrowing rates; and

c other factors specific to the PFI market such as the improved financing terms on more recent PFI deals and any cost efficiencies arising from the increased experience of the private sector in delivering PFI projects.

PART ONE

The terms of the original bank finance appear in line with other early PFI deals but subsequent improvements in PFI financing terms mean that, although the Trust has received a share of the refinancing gains, it continues to pay a premium on the financing costs compared to current deals

1.1 The terms of the bank finance in the original deal appear competitive for a bank financed PFI deal at that time **(Figure 4)**.

4 Comparison of debt financing terms of the Trust's PFI deal with other early PFI deals

Project	**Norfolk & Norwich hospital**	**Dartford & Gravesham hospital (Darent Valley)**	**South Bucks hospital**	**Calderdale hospital**	**North Durham hospital**
Sector	Health	Health	Health	Health	Health
Closing date	Jan 1998	Aug 1997	Dec 1997	Aug 1998	April 1998
Facility	£197 million	£108 million	£54 million	£95 million	£82 million
Lead arrangers	ABN Amro, Bank of Scotland, Barclays, HSBC & Societe Generale	Deutsche, Rabobank & United Bank of Kuwait	Dresdner	Halifax & Bank of Scotland	ABN Amro, Deutsche, Rabobank & Royal Bank of Scotland
Period of loan	20 years	20 years	23 years	27 years	20 years
Margin[1]:					
■ Construction	135 bp	150 bp	150 bp	140 bp	130 bp
■ Operations	125 bp	125 - 135 bp	140 - 150 bp	125 bp	115 bp
Project	**Bromley hospital**	**South Manchester hospital**	**Fazakerley prison**	**A19**	
Sector	Health	Health	Prison	Roads	
Closing date	Nov 1998	Aug 1998	Dec 1995	Oct 1996	
Facility	£157 million	£86 million	£63 million	£63 million	
Lead arrangers	ABN Amro, BNP Paribas & Dresdner	Bank of Scotland & Royal Bank of Scotland	ABN Amro & Bank of America	Industrial Bank of Japan & CIBC	
Period of loan	21 years	25 years	18 years	18 years	
Margin[1]:					
■ Construction	140 bp	135 bp	100 bp	150 bp	
■ Operations	125 bp	115 bp	150 bp	140 - 170 bp	

Source: Project Finance International

NOTE

1 The margin represents that part of the interest cost which reflects the risks of the project. 135 bp is 135 basis points. This means the interest cost is 1.35 per cent above LIBOR the London Interbank Offered Rate which is the base rate for commercial borrowing.

1.2 The successful delivery of the new hospital and the maturing PFI market have enabled better financing terms to be obtained on the funding in place prior to the refinancing producing a £34 million gain **(Figure 5)**.

5 Improvement in financing terms arising from the maturing PFI market and the successful delivery of the new hospital

Financing term	Original bank financing	Bond financing following the refinancing	Resulting refinancing gain (net present value) £m	How the refinancing gain arises
Period of borrowing[1]	20 years	32 years	29	Once the hospital was successfully delivered Octagon was able to increase the period of borrowing as funders are prepared to offer longer borrowing periods now the PFI market is more mature. The effect is that the repayment of borrowings is extended into later years so that the borrowings have a lower net present cost taking account of the time value of money.
Interest Margin[2]	LIBOR + 135 bp (construction) LIBOR + 125bp (operations)	Gilt +81bp (including a monoline fee of 29bp) - equivalent to LIBOR + 51bp at the time of the refinancing, a reduction of over half of the interest margin compared with the original borrowing	5	Most of this improvement in the interest margin reflects the lower risks which funders attribute to PFI projects now the market is more mature. Although the original financing terms allowed for a reduction in the interest margin once the new hospital had been constructed, the successful completion of the construction allowed a further small improvement to the interest margin for the operational period. The lower interest margin reduces the borrowing costs throughout the period of the borrowing.
Total refinancing benefit relating to the funding in place prior to the refinancing			34	

Source: Royal Bank of Canada

NOTES

1 To optimise the refinancing gain (in which the Trust would share) arising from longer borrowing periods available on refinancing the Trust agreed to extend the primary contract period from 30 to 35 years following the delivery of the new hospital. The minimum contract period now extends to 2037.

2 The interest margin is the additional interest cost, over and above the base rate for commercial borrowing, as represented by LIBOR (the London Interbank Offered Rate), to reflect the specific risks of the project.

3 The improved terms obtained by Octagon on refinancing are consistent with the financing terms in other PFI deals at the time of the refinancing in 2003.

1.3 Octagon has been able to generate further refinancing gains of £81 million from the improved market for financing PFI hospitals and lower general interest rates, mainly by increasing its borrowings and accelerating its shareholder distributions.

1 Octagon has taken on additional borrowings **(Figure 6)**.

2 The increased senior borrowings will now be repaid over a longer period **(Figures 7a and 7b)**.

3 As the increased borrowings were not needed to operate the project these additional funds, and the improved financing terms, have enabled Octagon to both increase and accelerate the benefits to its shareholders **(Figure 8)**.

6 Increase in Octagon borrowing

Source of funding	Pre-refinancing £m	Post-refinancing £m	Increase on refinancing %
Senior debt (Figure 7a)	200	306	53
Subordinated loan notes	32	32	–
Equity	1	1	–
Total	233	339	45

Source: Royal Bank of Canada (from Octagon records)

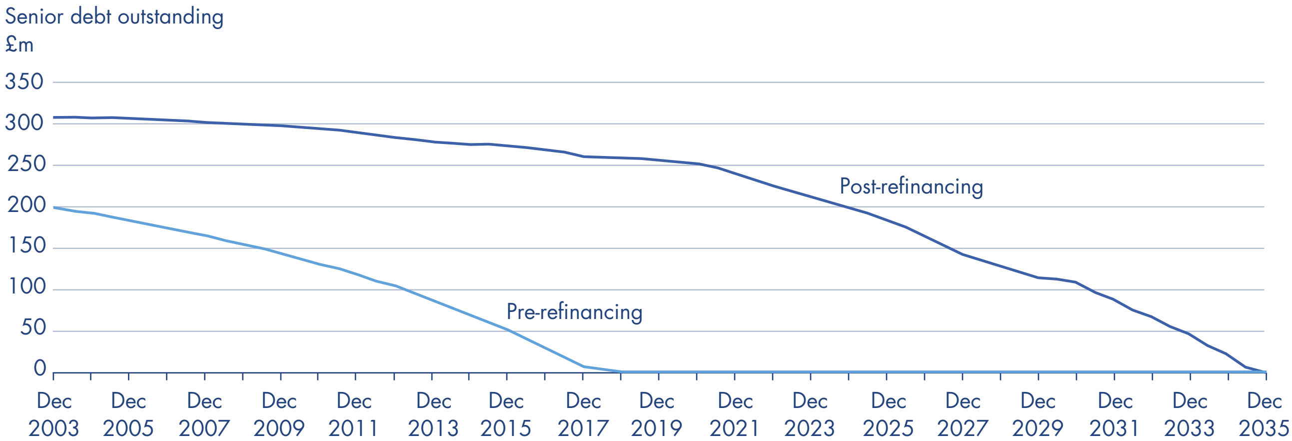
NOTES

1 The opportunity for Octagon to increase its borrowings at the time of the refinancing arose from a number of factors connected with: the better financing terms available as a result of the maturing PFI market; the successful delivery of this hospital and the demonstration that the operational phase of the project is going to plan; and the reduction in general interest rates.

A key part of the improved financing terms available to Octagon on refinancing related to the cover ratio (the extent to which expected net income must cover the level of debt repayment). When the original deal had been financed in 1998 the funders had been conservative in the level of annual debt repayments they would allow Octagon to take on in relation to Octagon's expected net income. By 2003, when the refinancing took place, funders were content to accept a higher ratio of debt repayment to income (equivalent to a lower cover ratio). This was because, compared to 1998, the funders now perceived a lower risk that unexpected movements in Octagon's income or non-financing costs might adversely affect Octagon's capacity to meet its debt repayment obligations.

In addition, because longer period of borrowings were now available on PFI deals (Figure 5) this gave Octagon the opportunity to spread the repayment of its borrowings over a longer period (Figures 7a and 7b). This meant that the annual repayments due on the original level of borrowings would be lower and a higher level of borrowings could be taken on. The combination of lower cover ratios, increased borrowing periods and other factors such as the reduction in commercial borrowing rates and the interest margins specific to PFI deals all enabled Octagon to increase its borrowings at the time of the 2003 refinancing in a manner acceptable to the funders.

7a Change in Octagon's outstanding debt

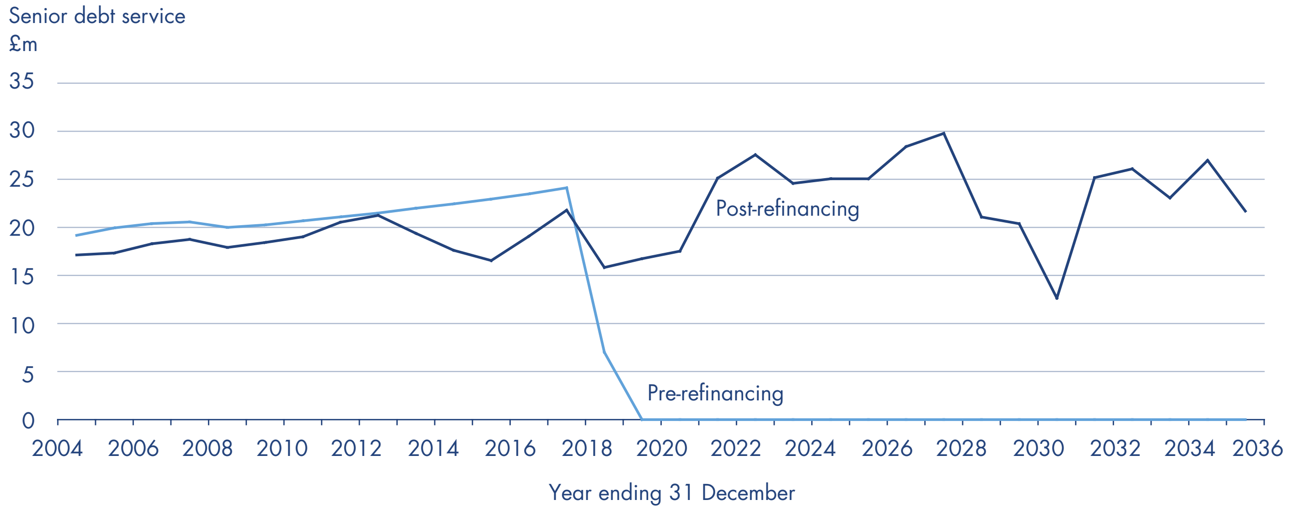


Source: Royal Bank of Canada (from Octagon records)

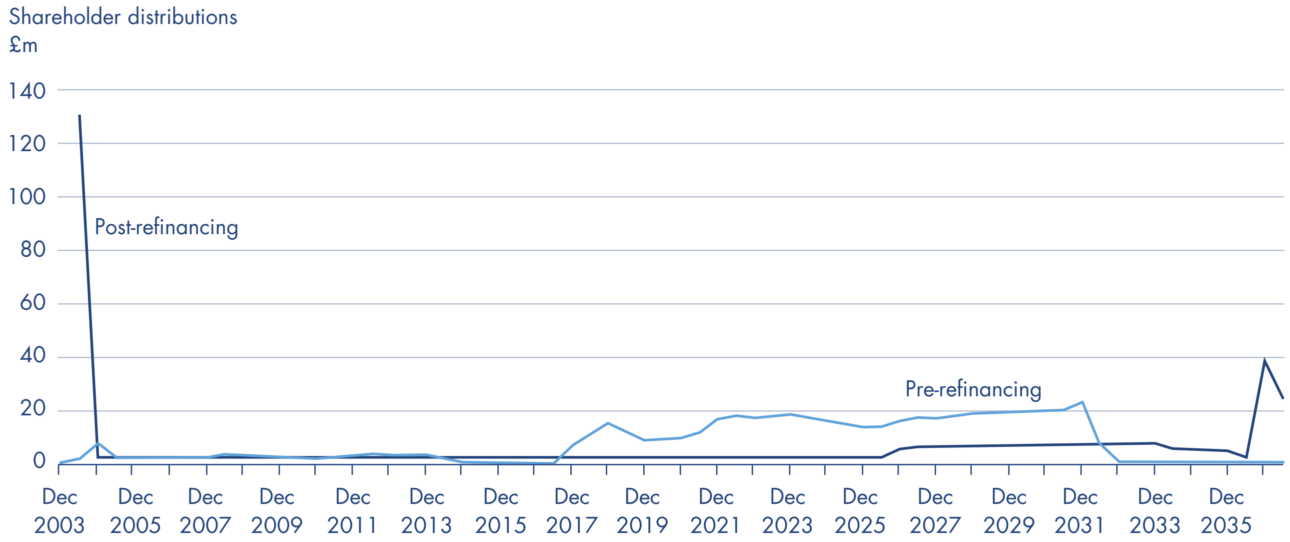
NOTE

Increasing the borrowings on the improved terms available in 2003, to allow shareholders to realise early benefits, produced a refinancing gain of £76 million. A further £5 million gain arose from extending the minimum contract period during which the borrowings would be repaid.

7b Change in Octagon's debt repayment



8 Acceleration of benefits to Octagon shareholders following the refinancing



Source: Royal Bank of Canada (from Octagon records)

4 Octagon has also benefited from falling general interest rates **(Figure 9)**.

9 Interest rate movements 1998-2003

Source: Bloomberg and Royal Bank of Canada (from Octagon records)

NOTES

Octagon only entered into short-term interest rate hedging in respect of part of its original borrowings. In respect of 75 per cent of its debt Octagon had protection against fluctuating interest rates through a fixed interest arrangement at 6.33 per cent (known as a fixed interest swap), until the end of 2003. In respect of the remaining 25 per cent of its debt Octagon had protection against fluctuating interest rates through linking movements in its interest rates to movements in the Retail Prices Index (RPI) at RPI plus 3.71 per cent (known as a RPI swap) until the end of 2007.

In respect of the remaining period of its original borrowings, which would not be subject to these hedging arrangements, Octagon was exposed to the risk of both favourable and unfavourable movements in interest rates. In accepting this risk Octagon made a commercial judgement which it subsequently benefited from as a result of the generally downwards trend in general interest rates which arose after 1998. At the time of the refinancing Octagon was forecasting rates of interest on general commercial borrowing as represented by LIBOR (the London Interbank Offered Rate) of 4.90 per cent compared with its average forecast of 6.62 per cent in 1998.

Octagon was able to increase the scale of its refinancing gains in 2003 as a result of this fall in general interest rates which had arisen since 1998. Royal Bank of Canada estimate that, on an indicative basis, around £35 million of the refinancing gain of £81million that mainly arose from Octagon increasing its borrowings and accelerating its shareholder distributions related to the reduction in general interest rates that had occurred since 1998. A further benefit of £5 million which Octagon had earned up to 2003 as a result of falling interest rates was part of its operating results in that period and as such did not constitute a refinancing gain as defined by the Refinancing Code and related guidance.

1.4 The Trust is receiving both benefits from the refinancing in accordance with the new code and also new risks but has assessed the overall effect of the refinancing as value for money.

1 The Trust is receiving around 30 per cent of the refinancing gains in accordance with the new voluntary code **(Figure 10)**.

2 To improve the affordability of the project, the Trust agreed to extend the minimum contract period by five years in return for a reduction in its annual payments by £1.8 million over the initial minimum contract period **(Figure 11)** and an extra £0.1 million a year share of the refinancing benefit.

10 Gains arising from the refinancing

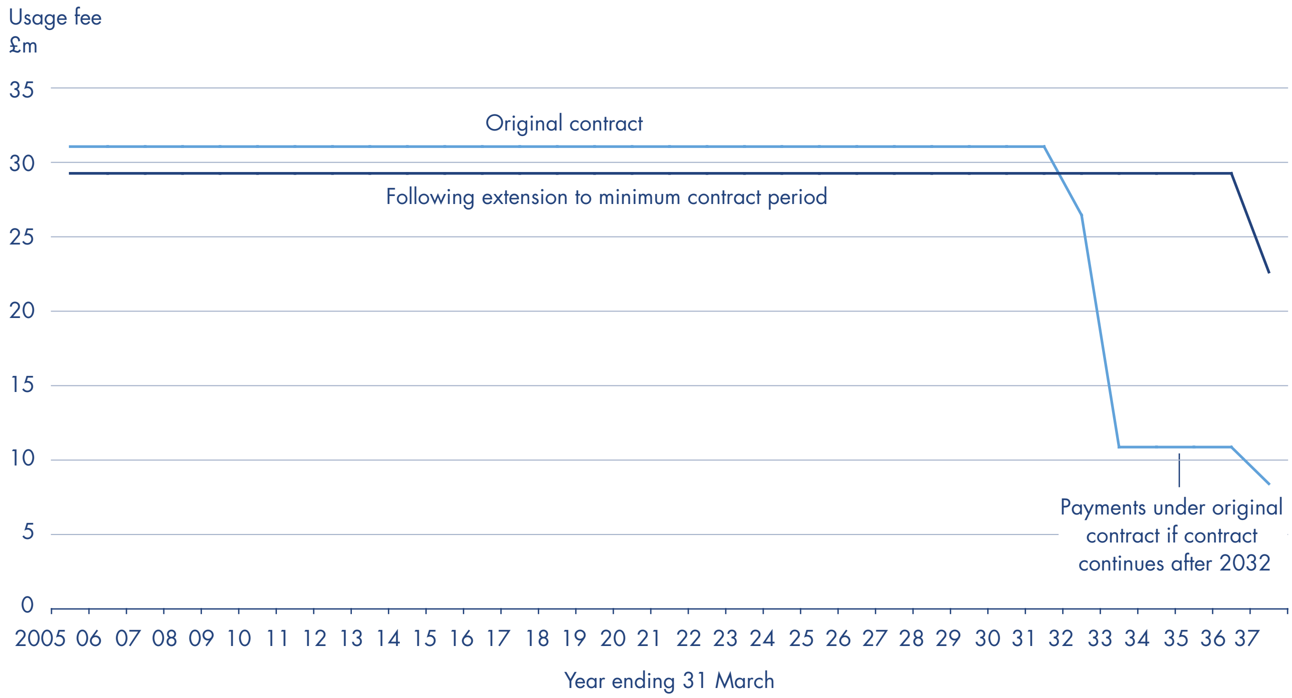
	£m	%
Trust share of refinancing gains	33.9	30.9
Octagon share of refinancing gains	75.8	69.1
Total refinancing gains subject to sharing allocation	109.7	100.0

Source: Royal Bank of Canada (from Octagon records)

NOTE

The gains were shared by applying the code for sharing refinancing gains on early PFI deals agreed between the Treasury and the private sector in 2002. In addition to the refinancing gains subject to the sharing allocation, as permitted by the code a further £5.8 million of refinancing gains were not subject to sharing to allow Octagon to make good a shortfall in shareholder returns which had arisen prior to the refinancing.

11 Extended minimum contract period and reduced annual usage fee following the refinancing



Source: Royal Bank of Canada

NOTES

1 Following the refinancing and the agreement to extend the minimum contract period the Trust's annual contract payments reduced, in March 2005 prices, by £3.6 million from £42.7 million to £39.1 million, a reduction of 8 per cent. There was a £1.8 million annual reduction as the Trust will be paying the previous PFI contract price over a longer period and a further £1.8 million annual reduction from the Trust's share of the refinancing gains which is being received by the Trust over time as a reduction to the annual PFI charges. £0.1 million of the Trust's annual share of the refinancing gains arose from its 50 per cent share of the refinancing gains conditional on the minimum contract extension.

2 The payments in Figure 11 relate to the usage fee and are in real terms. As agreed in the original contract the contract price is subject to annual increases for cost inflation as measured by the Retail Prices Index. The usage fee is part of the current total PFI contract price of £37.8 million (Figures 1 and 24).

3 The Trust bears the risk that its liabilities in the event of early contract termination would be higher following the refinancing but has demonstrated that, based on conservative assumptions of the current view of the likelihood of the contract being terminated early, the refinancing is value for money **(Figure 12)**.

12 Analysis of increase in termination liabilities following the refinancing

	A £m	B £m	C £m	D £m
Trust share of refinancing gain[2]	**33.9**	**33.9**	**33.9**	**33.9**
Increase in Trust's termination liabilities:[3]				
Maximum increase in termination liabilities	257.3	257.3	257.3	257.3
Expected value of the increased termination liabilities	**(7.3)**	**(10.7)**	**(3.7)**	**(5.4)**
Assumption[4]	That contract may be terminated at any time throughout the contract period (with a 10% probability in each year)	That contract may be terminated when increase in termination liabilities is highest (with a 10% probability)	That contract may be terminated at any time throughout the contract period (with a 5% probability in each year)	That contract may be terminated when increase in termination liabilities is highest (with a 5% probability)
Value for money (i.e. refinancing gain less expected value of the increased termination liabilities)[5]	**26.6**	**23.2**	**30.2**	**28.5**

Source: Royal Bank of Canada

NOTES

1 Figure 12 summarises the detailed analysis of the value for money of the refinancing which the Trust and its financial advisers Royal Bank of Canada carried out prior to the Trust agreeing to the terms of the refinancing.

2 The Trust share of refinancing gain and the expected value of the increase in termination liabilities are expressed as net present values.

3 The Trust's termination liabilities are linked to the levels of Octagon's outstanding debt which has increased as a result of the additional borrowings taken on to optimise the refinancing gain.

4 The Trust considers that each of the alternative assumptions in its analysis shown in this table is a conservative assumption of the current view of the likelihood of the contract being terminated early. It is possible that over the life of the contract, whose minimum period now extends to 2037, that judgements on the likelihood of early contract termination may change. If a future situation were to arise where the contract does have to be terminated early then the Trust could face significantly higher termination liabilities mainly because of the increased borrowings which Octagon took on at the time of the refinancing.

5 This value for money analysis, which was undertaken prior to the Trust agreeing to the refinancing, compares the refinancing gain with the expected value of the Trust's increased termination liabilities following the refinancing. It is part of a wider analysis of value for money which the Treasury and the Department expect NHS Trusts to complete before agreeing to a refinancing in the light of best practice which has developed in how to apply the Treasury's 2002 refinancing guidance. The wider analysis takes into account contract amendments such as a contract extension or other changes to the amount or profile of the annual contract price.

4 There are both possible risks and benefits to the Trust's decision to take its share of the refinancing gains over time (**Figure 13**).

13 Risks and benefits of the Trust's decision to take its share of the refinancing gains over time

Time		Potential risk: amount of refinancing gain outstanding based on taking refinancing gain over time (NPV)[1] £m	Compensating benefit: indicative reduction in maximum termination liabilities compared with taking refinancing gain as a lump sum[3] £m
At time of refinancing	(2003)	33.9	33.9
Ten years on	(2013)	18.7	29.8
Twenty years on	(2023)	9.2	22.6
End of minimum contract	(2037)	-	-

Source: The Department, the Trust and Royal Bank of Canada

NOTES

1 On advice from the Department of Health the Trust chose to take its share of the refinancing gains over time by way of a £1.8 million reduction to its annual contract payments. This was consistent with the Department's advice on other refinancings and reflected the Department's view that:

A taking the gain over time allows the gain to benefit both current and future users of the Trust's clinical services;

B the Department's accounting requirements would create additional charges to the Trust if the gain was taken as a lump sum as this would be treated as an asset which would be amortised as a charge in subsequent years' accounts;

C if the refinancing gain was taken as a lump sum then, in order to maintain the level of the refinancing gain, Octagon would have had to increase its borrowings by £33.9 million to fund the lump sum payment to the Trust. Additional borrowings by Octagon would have further increased the Trust's potential termination liabilities; and

D the potential credit risk from part of the Trust's share of the refinancing gain being outstanding in the event of early termination of the contract would be addressed as the Trust would hope to continue to receive its share of the refinancing benefit by continuing to pay the reduced annual charge in any arrangement with the project funders or new contractors.

2 Prior to the Trust's decision to take its share of the refinancing gain over time the central Norfolk health system (the Trust, the local Mental Health Trust and four Primary Care Trusts) had expressed a preference to receive the gain as an immediate lump sum to enable it to invest in modernising service delivery to achieve savings required to meet financial balance across the system.

3 The reductions in maximum termination liabilities arising from taking the refinancing gains over time are indicative figures based on the repayment profile of the additional borrowings which Octagon would have had to take on in order to fund the Trust's share of the refinancing gain as a lump sum and to maintain the level of the refinancing gains. The Trust's actual termination liabilities at any future date would, in practice, depend on a number of other factors including prevailing interest rates at the time of the termination.

1.5 After sharing in refinancing benefits NHS Trusts continue to pay a premium on the financing costs on early PFI hospital deals compared to current deals **(Figure 14)**.

14 Comparison between early PFI deals and current PFI deals

Aspect of refinancing	Early PFI deals	Current PFI deals
Improvement in financing terms through maturing PFI market	In early PFI deals the public sector should receive 30 per cent of any refinancing gain arising from improved financing terms as a result of the maturing PFI market through applying the voluntary code for sharing refinancing gains	The public sector would expect to get the benefit of the improved financing terms in the initial contract price
Further refinancing, for example by increasing borrowings on completion of the construction phase	In early PFI deals the public sector should receive 30 per cent of any refinancing gain through applying the voluntary code for sharing refinancing gains	In current deals the public sector would receive a contractual 50 per cent share of any refinancing gain after the contract was let[1]

As explained in paragraphs 1.2 and 1.3 above better financing terms are available in current PFI deals compared to early PFI deals as a result of the maturing PFI market and the reduction in general interest rates in recent years. As Figure 14 shows, in a current deal the public sector will expect to get these benefits in the initial contract price or, if only available after contract letting, then the public sector will receive 50 per cent of the benefit. On early PFI deals such as that entered into by the Trust, which did not specify sharing refinancing gains, the public sector will at best be limited to receiving 30 per cent of the improvement in financing terms now available through sharing in refinancing gains under the voluntary refinancing code. As a result, after sharing in refinancing benefits, NHS Trusts with early PFI deals continue to pay a premium on the financing costs compared to current deals.

Source: The National Audit Office

NOTE

1 Because the public sector will expect to get the benefit of the improved financing terms in the initial contract price in current PFI deals, there is likely to be a significant reduction in the extent of subsequent refinancing gains compared with early PFI deals. The Trust's advisers, Royal Bank of Canada, consider that the scope for the private sector to also generate refinancing gains after a contract is let, by increasing borrowings and accelerating shareholder distributions, will similarly be reduced in situations where the level of debt, in relation to the private sector's expected net income from the project, has been maximised in the original funding arrangements.

PART TWO

There are other factors which may affect the overall comparison of the Trust's deal with current PFI deals including the fact that the benefits of a new hospital have been received earlier than in many other communities and the high rates of recent construction cost inflation have been avoided

2.1 There are a range of factors, some of which have yet to be fully analysed by the Department, which will have affected the pricing of current PFI hospital deals compared with early PFI deals **(Figure 15)**.

15 Factors which may affect the comparison of the pricing of PFI hospitals today compared with those procured in 1998

The factors which will affect comparisons of the pricing of PFI deals at different points in time include the following:

The nature of the deals being entered into

Specification: The nature of the facilities which are being procured in 2005 has evolved and changed in the light of developments in health care provision since 1998.

Changes in contract periods: The minimum contract periods which the Department now seeks in its PFI hospital procurements are generally longer than those which were contracted for in early PFI deals. This affects the annual price payable by NHS Trusts.

General economic factors

Building costs: Building cost inflation has been significantly in excess of general inflation since 1998 (Figure 16).

Commercial interest rates: General interest rates have fallen since 1998 (Figure 9).

Factors specific to the PFI market

Improved financing rates: Financing terms have improved as a result of the development of the PFI market and the successful delivery of many early PFI deals (Figures 5 to 8).

Increased familiarity by the private sector with estimating and managing the costs of PFI projects: As a result of the experience of completing early PFI buildings, and managing the early years of the operation of these buildings, the private sector should be able to use this knowledge to improve the efficiency of their pricing of future PFI deals, particularly where there is strong competition during the procurement.

Source: The National Audit Office

NOTE

The Department collects information on various aspects of the pricing of PFI deals in its monitoring of PFI contracts entered into by NHS Trusts. The Department has not fully analysed all the factors which may have affected the pricing of PFI hospital deals at different points in time.

2.2 One significant factor, construction cost inflation, has been much higher than general inflation in recent years.

1 Construction cost inflation in public sector building work has been much higher than the increase in general prices since 1998 **(Figure 16)**.

2 The high rate of construction cost inflation in recent years has affected the costs of PFI deals **(Figure 17)**.

16 Comparison of Aggregate and Mean Inflation 1998-99 to 2004-05

	BMI % increase[1]	MIPS % increase[2]	RPI % increase[3]
Aggregate 1998-99 to 2004-05[4]	22.8	49.2	18.5
Average yearly compounded change[4]	3.5	6.9	2.9

Source: The Department

NOTES

1 BMI is the Building Maintenance Index compiled by the Royal Institute of Chartered Surveyors (RICS).

2 MIPS Is the Median Index of Public Sector Building Tender Prices published by NHS Estates based on information compiled by the Department of Trade and Industry.

3 RPI is the all-items Retail Prices Index.

4 This is the compounded year on year effect. Figures included for 2004-05 are forecasts.

5 The factors which have contributed to the high rates of recent construction cost inflation include large purchases of building materials by certain overseas countries and a relatively large supply of government building projects in the United Kingdom market.

In addition to the information shown in the above table the Treasury has conducted separate analysis indicating that the significant inflation in construction prices may have added 10 per cent to the cost of public sector building projects in recent years.

17 Comparative building costs on PFI hospital deals

	Norfolk & Norwich hospital (1998)	The Department's expectation of the range of construction costs which will apply to current PFI hospital deals (2005)
Building costs per square metre	£1,589	£2,500-£3,000[1]
Increase compared with Norfolk & Norwich		57-89%[2]

Source: The Department

NOTES

1 The Department currently expects, based on information from various market sources, to pay £2,500 - £3,000 per square metre for PFI building work. There may be differences in building cost rates in different parts of the country at any point in time. The Department is aware that the building work for a PFI hospital outside London, comparable to the Norfolk & Norwich hospital, was recently priced at £2,600 per square metre.

2 The increase in PFI building costs between 1998 and 2005 is higher than the general rates of increase in public sector building costs of 49.2 per cent shown in Figure 16. The general rates of increase in public sector building costs in Figure 16 is derived from a mix of projects of varying degrees of complexity. The Department considers that a new hospital on a greenfield site, incorporating advanced technology, is at the relatively complex end of the scale and explains the higher than average increase in building costs which have occurred on PFI hospital projects. In addition, as explained in our previous report on PFI Construction Performance (HC371 2002/03) the private sector, in taking forwards PFI building projects, seeks to consider a whole life solution and so they may make trade-offs between spending more money on initial building costs to produce savings on later maintenance costs.

2.3 The Department has demonstrated that, if no other savings are priced into a current bid, then the additional building costs arising from construction cost inflation probably offset the benefit of the lower financing costs which are now available **(Figure 18)**.

2.4 The Trust and the local community have received the benefits of a new hospital earlier than many other communities **(Figure 19)**.

18 The Department's estimate of the effect of pricing the Norfolk & Norwich hospital deal at current rates of construction costs

Base construction costs of Norfolk & Norwich hospital	£159 million
Department's estimate of the increase in construction costs in real terms that would arise based on the rate of building costs the Department currently expects to pay on PFI hospitals	£52-95 million
Department's estimate of the increase in construction costs in real terms based on the general increase in public sector building costs (as shown by the MIPS index, Figure 16)	£41 million

Source: The Department

NOTES

1 The increase in construction costs is expressed in real terms as the annual price of the PFI contract increases, in any event, for changes in the Retail Prices Index (RPI).

It is not possible to be certain on how the market would price the Norfolk & Norwich hospital if the same deal was to be funded today. The Department estimates, based on advice from Royal Bank of Canada, that the additional increase in building costs in real terms shown in Figure 17 could increase the annual price of the PFI original deal by up to £5 million whilst the improved financing terms now available could reduce the annual price of the original PFI deal by a similar amount, assuming no increase to the original minimum contract period or the level of debt in Octagon's 1998 financing arrangements. Octagon was also able to generate substantial additional refinancing gains by increasing its borrowings and accelerating its shareholder distributions but Royal Bank of Canada considers there would be less scope for such gains on current deals in situations where the level of debt, in relation to the private sector's expected net income from the project, has been maximised in the original funding arrangements. The Trust has received a benefit of £1.7 million a year from these improved financing terms now available including the increase in Octagon's borrowings, with the balance of the Trust's £3.6 million a year benefit from the refinancing (Figure 24) arising from the contract extension. There may, however, be other factors involved in comparing the pricing of early PFI hospital deals with current deals including any efficiencies which the private sector can now offer as a result of their greater experience of estimating and managing the costs of delivering PFI buildings and related services. The Department has not analysed all the factors which may have contributed to a comparison of the pricing of early PFI deals with current deals (Figure 15).

19 The benefits to the Trust and the local community during 1998 to 2005 from the early delivery of a new hospital

The Trust has identified the following benefits which the Trust and the local community have received from the early delivery of the new hospital:

- Improved overall environment for patient care
- Improved efficiencies due to better adjacencies between clinical activities which have improved patient flow and patient safety, reduced travelling time within the hospital and enabled better access and efficiency of working within diagnostics and treatment
- Improved ratio of single rooms on wards enabling isolation of appropriate patients

Source: The Trust

PART THREE

It might have been possible for the Trust to have improved the original deal with greater competition and better defined requirements in the closing stages but the Trust is not convinced this would have brought added benefits as it sought to close a pathfinder deal which had already been assessed as value for money

3.1 The Trust's approved business case assessed this early PFI hospital deal as value for money when the contract was let in 1998 and when the additional works were commissioned in 2001 **(Figure 20)**.

20 The approved assessment of the value for money of the deal with Octagon in 1998 and 2001

The Trust's full business case for the original deal with Octagon in January 1998, approved by the Department and the Treasury, was assessed as value for money after taking into account the following factors:

- Octagon had been selected as being the preferred bidder following a competitive procurement in which the Trust ranked Octagon as being the best bidder on both price and quality;
- The Trust took steps to benchmark the price variations which arose after Octagon became preferred bidder and was satisfied that these were reasonable;
- The Trust was satisfied that the net benefits from a PFI procurement were at least as good as what might have been obtained from conventional procurement. This included an expected small cost saving from the deal with Octagon compared with a public sector comparator estimate of what the deal might have cost under conventional procurement;
- The Trust's case for the additional works commissioned in 2001 was also approved as value for money.

Source: The Trust's approved Full Business Case and other analysis prior to contract letting

NOTES

1 The Trust's Full Business Case was approved by the Department and the Treasury.

2 In the scope of this examination, which focuses on the 2003 refinancing, the National Audit Office has not carried out a full examination of all aspects of the original deal.

3.2 Alternative financing solutions were not seriously explored to ensure the financing terms remained competitive during a two year deal closure, the Trust considering that it did not wish to further delay the project and that it was not convinced that the overall terms of the deal could be improved bearing in mind the relatively undeveloped state of the PFI financing market at that time.

1 The Trust chose not to request Octagon to seriously consider bond finance, although it was subsequently used as the financing method for a number of PFI hospitals, because the Trust did not want to delay closing the deal and it was not certain that suitable bond finance would be available for the deal **(Figures 21 and 22)**.

21 Number of PFI hospital deals using bank and bond finance

Year in which contract let	Number of deals using bank finance	Number of deals using bond finance[1]
1997	2	1
1998	5	1
1999	3	4
2000	4	1

Source: The Department of Health

NOTE

1 Bond finance became the financing method used for a number of PFI hospitals in the late 1990s because it gave the prospect of lower financing costs as the terms of the finance were particularly appropriate for the index-linked contract payment method used in PFI hospital deals. Bond finance was the form of finance used on the refinancing of this project to maximise the refinancing benefits.

22 Reasons the Trust did not actively seek bond finance

- The Trust and its advisers chose not to request Octagon to seriously explore bond finance in closing this deal in January 1998 as the Trust did not want to delay further completing the deal and it considered the bond market at that time was still immature so that it could not be certain that bond finance could be used for this deal to deliver improved financing terms.
- A bond issue for this deal in January 1998 would have been significantly larger than any PFI bond issue that had been completed at that time and, although two smaller PFI hospital deals were funded by bond finance during 1997 and 1998, the first indexed PFI bond, now the main funding option for large hospital deals, was not issued until May 1999.
- The Trust considered that exploring the possibility of bond finance would have delayed completing the deal, particularly as it considered it likely that time would have been needed to arrange monoline insurance for the bond issue when monoline insurers were relatively inexperienced in this type of project compared to today.
- The Trust was particularly concerned about the risk of Octagon seeking to increase the price of the deal if it was delayed to compensate for the effect of further construction cost inflation which was then running at 6 per cent per annum. In addition, the Department considered that, as the PFI hospital market was in its formative stages in 1997 when this deal was being finalised, a late change to bond finance would have had an adverse affect on the interest of the banks which had supported this deal in financing other PFI deals.

Source: The Trust

2 A funding competition would have allowed alternative options to be tested more rigorously although at the time this was not an established approach **(Figure 23)**.

23 Reasons why a funding competition could have helped to test whether the best financing solution was being obtained and the reasons why this approach was not used

Reasons why a funding competition could have helped to test value for money

- There was a two year delay between preferred bidder and financial close (January 1996 to January 1998).
- Where there is a delay in closing a deal a funding competition can be helpful before closing the deal to ensure the best possible financing terms are obtained (see NAO report on the Treasury Building funding competition, HC328 2001/02).
- A funding competition could have helped test the decision on whether to use bank or bond financing on this deal.
- It would have also put greater pressure on the cost of finance provided by the banks.
- A funding competition was held by Octagon to get the best terms for the refinancing.

Reasons why this approach was not adopted

The Trust and its advisers acknowledge the potential benefits that a funding competition can contribute in closing a deal. For the following reasons they consider that a funding competition would not have been feasible in closing the Trust's deal in 1998:

- Decisions at the time were influenced by a wish to close this pathfinder deal, which had already been significantly delayed, without further delay so as to promote the development of the market for PFI hospitals. The market was then in its formative stages and needed completed deals to create confidence in this new form of procurement.
- As the market for PFI hospital deals was not fully developed at the time this deal was being closed, and this was the largest health PFI project then in the market, there would have been constraints on the extent to which alternative sources of funding could have been sourced. In respect of bank finance, the Trust and its advisers consider that as a significant number of the banks then involved in the PFI market were already funding this deal there were only a few other banks who could have been invited to participate in a funding competition.
- The concept of a funding competition was not, at the time the Trust was closing this deal, an established approach in PFI procurement. It gained prominence when the Treasury completed a funding competition in early 2000 for the Treasury Building PFI procurement which had previously been deferred.
- In particular, to avoid extensive delay in running a funding competition, the funding competition needs to be based on market acceptance of the project documentation. It was only in the closing stages of agreeing this deal in late 1997 that the contract terms for this pathfinder deal were finally accepted by the funders.
- The Trust was concerned that any benefits from running a funding competition might have been offset by Octagon increasing the contract price to take account of construction cost inflation, which was then around 6 per cent per annum, during any further delay in closing the deal as a result of running a funding competition. The Trust estimates that construction costs would have increased by around £700,000 for each month of delay and it is likely that Octagon would have sought to recover these additional costs from the Trust.

Source: The National Audit Office and the Trust

3.3 The annual charge increased by a fifth in a non-competitive situation due to specification changes, including an increase in the number of beds of over 40 per cent, although the Trust took steps to test through benchmarking that the pricing of this additional work was reasonable.

1 The annual price increased by 20 per cent after Octagon became the preferred bidder up to the time of the refinancing **(Figure 24)**.

24 Increase in annual contract price since Octagon became the preferred bidder

	Annual price £m	Increase in beds £m	Other variations £m	Refinancing £m	Removal of IT contract[2] £m
When Octagon became preferred bidder	**35.6**				
Additional 108 beds[3]	2.8	2.8			
Other changes	0.6		0.6		
At contract letting	**39.0 (+10%)**				
Additional 144 beds[3]	3.4	3.4			
Other changes	0.3		0.3		
Prior to the refinancing	**42.7 (+20%)**				
Refinancing	(3.6)			(3.6)	
Price following the refinancing	**39.1 (+10%)**				
Price movements since refinancing	(1.3)		0.9		(2.2)
Current price	**37.8 (+6%)**				
Total price movements since Octagon became preferred bidder	**2.2 (+6%)**	**6.2**	**1.8**	**(3.6)**	**(2.2)**

Source: *The Trust*

NOTES

1 Figures expressed in March 2005 prices.

2 The provision of IT services are now under separate contractual arrangements.

3 Bed numbers have increased by 41 per cent from 701 at preferred bidder to 989 as a result of additional Trust requirements. The increase arose from the two main variations shown above which added 252 new beds and a further 36 beds arising from conversion of office space to ward usage.

2 It is possible that a better pricing could have been achieved if the Trust's current requirements had been the basis of the original bidding competition although the Trust took steps to test through benchmarking that the pricing of additional building work has been reasonable **(Figure 25)**.

25 Factors which may have affected the extent to which the price variations have been value for money

- The price variations (which have included an increase in bed numbers from 701 to 989) occurred in a non-competitive situation after Octagon became preferred bidder.
- There can be risks to value for money in any non-competitive procurement because, in pricing the work, the contractor is not under pressure from other bidders. In these situations, partnering and joint working arrangements, where new building projects are taken forwards by a pre-selected contractor can produce value for money where the terms of the new building work are subject to a pricing basis developed under a previous competition or good benchmarking arrangements.
- Including the Trust's increased bed requirements in the original specification which was competitively tendered may have produced keener pricing for these additional beds through the strength of competition between bidders to win the PFI contract.

The Trust's approach

- The Trust drew up its specification within the then NHS guidelines on bed numbers for new hospitals. Commissioning additional bed numbers then may also not have been possible within the Trust's limit of what would be considered affordable.
- Octagon considers that, in respect of those additional requirements which the Trust requested during the construction of the new hospital it would not, at that time, have been practicable to put the work out to competition as the construction contractor was already on site. Octagon also considers that deferring the additional work until a competitive tender could take place may have increased the pricing of the work because of construction cost inflation.
- The Trust took steps to test, through benchmarking, that Octagon's price changes were reasonable. Davis Langdon and Everest, the Trust's professional advisers, benchmarked and technically reviewed Octagon's proposed capital costs.

Source: The National Audit Office and the Trust

GLOSSARY

Basis point

1/100th of 1 per cent. A measure normally used in the statement of interest rates; 100 basis points equals 1 per cent.

Cover ratios

Cover ratios are standard tools used in the financial appraisal of projects. The ratios measure the extent to which current and future liabilities to lenders are covered by available cash flows.

Funding competition

A process whereby the financing for a project is obtained after a competition involving several potential funders rather than being provided by an incumbent funder retained by the project consortium appointed as preferred bidder.

Hedging

Instruments used by the consortium company to manage the risk of variations in future rates. In most cases, the company will choose to fix its future interest rate thereby providing it with surety about what its financing charges will be.

Interest margin

An additional amount that a bank charges on a commercial loan over and above its own cost of providing the loan. The margin serves to provide the bank both with a profit and compensation against the risk of not having the loan repaid. The extent of the margin reflects the risks inherent in providing a loan to a particular project. LIBOR plus one per cent, for example, means an interest margin of one per cent above general commercial borrowing rates as represented by the London Interbank Offered Rate (LIBOR). A high margin means that lending to the project is perceived by funders as being relatively risky.

Internal rate of return

The discount rate which results in the discounted project cashflows, including both payments and receipts, totalling to zero. It is the standard measure which the public sector has used to compare the returns expected by shareholders of consortia bidding for contracts. It is not an indication of the future year on year rate of annual returns which private sector investors anticipate realising from the project but reflects the time value of when benefits are received.

LIBOR

London Interbank Offered rate. The interest rate at which banks will lend to each other.

Monoline fee

The fees payable to the monoline insurer (see below).

Monoline insurer

An institution that insures investors in the bonds guaranteeing that they will be paid. The effect of this is to enhance the credit rating of the bond to that of the Monoline Insurer, typically AAA, the highest rating, which reduces the cost of the bond to the bond issuer.

Senior debt	The debt that is ranked highest in terms of claims on project cashflows and therefore carries the lowest risk that it will not be repaid.
Subordinated loan notes	Debt over which senior debt takes priority. In the event of bankruptcy, subordinated debt lenders receive payment only after senior debt is paid off in full.
Swap	An arrangement whereby a loan which has a variable rate of interest (which will change in relation to market rates of interest) is exchanged for a loan which has a fixed rate of interest.
Swap rate	The interest rate at which a swap (see above) is affected.