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Northern Ireland are broadly similar, there are specific features of the Scottish case that need to be summarized in order to provide a context for the fieldwork research reported in this article. Rather than capital being treated as a 'free good', providers now pay for their land, buildings and equipment. Capital charges, consisting of interest and depreciation, are paid by those providers constituted as directly managed units (DMUs) to their parent health board (HB) for onward transmission to the NHS Management Executive in Scotland (ME(S)). Trusts pay capital charge equivalents, consisting of dividends on Public Dividend Capital and interest on Interest Bearing Debt, not to ME(S) but to the Treasury which treats them as part of general government revenue. Providers are able to afford such payments because the purchasing budgets of HBs have been uplifted, in the knowledge that capital charges and capital charge equivalents will flow back to, respectively, ME(S) and the Treasury.

In the first years of capital charging, the budgets of HBs were uplifted by exactly the amounts they required in order to meet the actual capital charges of the providers they contracted with, whether their 'own' or external. This was achieved through a capital charging matrix, with providers as the rows and purchasers as the columns. Capital charges neutrality (i.e. full reimbursement of actuals) was a useful transitional mechanism, as this minimized disturbance at the time of first implementation. In the medium term, however, the effectiveness of capital charging as an efficiency mechanism demands that full reimbursement is abandoned. The opposite extreme is full weighted capitation, when an HB receives funding for capital charges not on the basis of the actual capital charges of the providers with which it contracts but an amount determined by population-based factors. ME(S)'s intention has been to move from 100% reimbursement to 100% weighted capitation over a period of 6 years. Points along this spectrum involve $x\%$ being allocated on the basis of provider actuals, and $(100 - x)\%$ on the basis of weighted capitation. The intention was that in 1994–1995, 60% would be reimbursed and 40% would be on weighted capitation. In the event, this intention was frustrated by data revisions on capital charges after capital charges allocations had been communicated to HBs by ME(S). Consequently, in 1994–1995, there were

marked differences in the extent to which particular HBs had moved towards full weighted capitation.

Given the government's expectation that capital charging would generate efficiency gains, much importance attaches to the attitudes of NHS managers towards capital charging, and to their views about its impact on managerial behaviour. What managers in provider units think about capital charging is one vital piece of the evidence on which an overall assessment of capital charges can eventually be made. It should, however, be recognized that some managers may discern which features of the accounting rules and of the funding system are beneficial to their organizations, and which are damaging, and consequently modify their responses to questions on these matters.

Method

Interviews were conducted at all 46 Scottish mainland providers during 1994 in order to gather the views of NHS managers about capital charges. There were 141 usable responses out of 148 identified possible respondents: this gave a usable response rate of 95%. Moreover, 98% of the usable interviews were recorded. Structured interviews were conducted following the lines of a questionnaire. The interviews sought explanations of responses and also gave managers the opportunity to develop their views about capital charging in a relatively unstructured way. It is these interviews which provide the source of the evidence used in this article. The expository strategy is to use these responses as a vehicle for highlighting expected benefits as well as concerns.

In light of prior knowledge that the implementation of capital charges had encountered difficulties, the researchers identified those groups whom they thought would be most knowledgeable about capital charges. At that juncture – just under 3 years after initial implementation – it was decided not to direct the questions at chief executives/unit general managers, but to approach those functional specialists who were most closely involved. The judgement was made that the advantage of close involvement outweighed any argument ('accountants would naturally be in favour of more accounting') that functional specialists would be particularly well disposed to changes that emphasized their own

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importance. At each provider, these respondents were the Director of Finance; the person managerially responsible to the Chief Executive for the estate (sometimes the Director of Operations/Estates, sometimes a lower level estates manager); the accountant managerially responsible to the Director of Finance for capital charging; and the accountant who operated the capital charges software (sometimes the latter two posts were combined).

Analysis of the questionnaire results (Heald and Scott, 1996) found strong support for the principle of capital charging and an expectation that efficiency gains would result. There was an expectation that capital charging would lead to both less investment and more disposals, thus reducing the size of the NHS estate. Unsurprisingly, the directors of finance were the best informed group; the majority of cited respondents come from that group. Undertakings were given to all respondents that they would not be identified. Accordingly, identifiers are attached to each respondent who is quoted from the interview transcripts. Interviewees are designated as: DoF (Director of Finance); OA (other accountant); and DoOE (Director of Operations or Estates, or Estates Manager). Provider units are designated as: acute; specialized; community; and mixed acute/community. When the interviews were conducted in 1994, 39 of the providers were Trusts and 7 were DMUs. From 1 April 1995, all were Trusts. However, this distinction is not reported because this information would in many cases identify particular individuals and provider units.

The chief test of an incentive mechanism like capital charging is whether the benefits outweigh the costs, with evidence being sought on whether introduction improves the quality of decisions. Amongst the benefits are the ways in which capital charges change managerial thinking about capital assets, and thereby result in efficiency gains. The costs are those associated with the implementation of the capital charges system and with possible perverse incentives that may have dysfunctional effects. The purposes of this article are to discuss the uses of capital charges information and to probe managerial perceptions as to the nature of the incentives inherent in NHS capital charging. The majority of respondents (83%) came out in favour of capital charges being 'a worthwhile financial innovation' (Heald and Scott, 1996). However, in order to probe

whether capital charging will have the desired incentive effects, it is necessary to examine the use of capital charges information by management.

Influences on decision-making

For the purposes of capital charging, assets are divided into three types: land; buildings; and equipment. Land, buildings and equipment in operational use are valued at depreciated replacement cost (DRC). For buildings, the gross replacement cost (GRC) of 23 components is estimated before a reduction is made for accumulated depreciation for the expired life. Between periodic revaluations, conducted every 3–5 years, there is indexation using centrally determined indexes. There is a formal procedure for declaring assets surplus to requirements and available for disposal. Surplus assets, when land and buildings, are valued at open market value for alternative use. Other surplus assets are valued at recoverable amount (Heald and Scott, 1995).

The principal contexts in which use might be made of capital charging information are considered below: capital programme; asset disposal programme; maintenance programme; contract pricing; and budgetary devolution. The Table reports the percentages of respondents affirming that use was made of capital charges information for these purposes. A small number of respondents took advantage of the invitation to write in other uses, though these are mostly related to the specified uses. In total, 83% of respondents indicated some use(s) of capital charges information. Of the remainder, 7% indicated no use, 9% indicated 'don't know', and 1% gave no answer. However, the interviews clearly revealed that the reported uses of capital charges information were sometimes prospective: 'these are all things we should be using capital charges information for, but we haven't actually done so yet' (DoF, acute 1). Consequently, the percentages in the Table should be interpreted more as a guide to managerial views on the relevance of capital charges information than as statements about current practice in 1994.

Capital programme

Almost three-quarters of total respondents (73%), representing 89% of those who cited at least one use, viewed capital charges informa-

Table Uses of capital charges information

	Directors of finance		Other accountants		Operations and estates		All respondents	
	n	%	n	%	n	%	n	%
What use is made of capital charges information as an aid to management decision-making? (respondents were permitted to select as many categories as they desired)								
Standard responses contained on questionnaire:								
For decisions on the capital programme	35	78	38	67	31	78	104	73
For decisions on the asset disposal programme	28	62	23	40	26	65	77	54
For decisions on the maintenance programme	14	31	14	25	17	43	45	32
For decisions on contract pricing	37	82	41	72	22	55	100	70
For devolved budgets to functional budget holders	24	53	17	30	12	30	53	37
For devolved budgets to clinical budget holders	25	56	18	32	9	23	52	37
None	5	11	4	7	1	3	10	7
Don't know	1	2	8	14	4	10	13	9
Non-standard answers volunteered by respondents:								
For benchmarking	1	2	0	0	0	0	1	1
For devolved budgets to sectional budget holders	0	0	1	2	0	0	1	1
For option appraisal	1	2	1	2	1	3	3	2
For planning purposes	0	0	0	0	1	3	1	1
For decisions on retraction	1	2	0	0	0	0	1	1
For business planning decisions: primary care asset management	0	0	1	2	0	0	1	1
For performance indicators	0	0	0	0	1	3	1	1
For shadow budget devolution for 95-96	1	2	0	0	0	0	1	1
For unit transport policy	0	0	1	2	0	0	1	1
No answer	0	0	1	2	0	0	1	1

tion as relevant to decisions on the capital programme. One of the factors which stimulated the introduction of capital charging was the substantial concern – frequently expressed in the research and policy literature – that NHS capital programmes have exhibited serious weaknesses (Mooney and Henderson, 1986; Milne, 1988). Respondents readily provided examples of problems familiar from this literature, and generally sounded optimistic that capital charging would discipline behaviour. Prior to the introduction of capital charges 'we got a lump of money and we spent it and I'm sure most hospitals could quite rightly say that a lot of their investment possibly wasn't well focused, particularly when you look at the timing of the investments – money had to be spent by year end or else it was lost and a lot of crazy investments over the years now have capital charge costs to meet' (DoF, acute 1). In retrospect, some projects might not have gone ahead in the presence of capital charges: 'I can think of one particular project that we might not have gone ahead with if we had had [fore]sight and we had known more about capital charges' (DoF, specialized 1).

Providers are less likely to go ahead with large capital plans which could undermine their competitive position: 'It does act to discourage Trusts from taking that leap into the dark, particularly if they have a fear or a concern that they have neighbouring Trusts who would be likely to poach the patient activity' (DoF, acute 2). Many providers required additional justification for new investment: 'We are very keen at the moment on what we call capital-led revenue savers which is investing capital to produce revenue savings over a given payback period' (DoF, specialized 2). 'We've got the possible replacement of the [acute hospital name] but in true revenue terms it's an actual saving. You can actually save so much in maintenance contracts that the capital investment would lead to lower revenue costs, but the capital charge means that there is a net increase in the cost of the service being provided, whereas previously that would not have been seen and there would have only been a revenue saving' (DoF, mixed acute/community 1). 'I think [capital charging] is influencing decisions because it's been injected as the additional cost which wasn't there before and is taken into account in the sense of what impact it would have on the services we sell' (DoF, acute 3). Caution was expressed about

the use of capital money where there had been less caution before: 'rather than just buying something because we have the money, we now think twice about it. We're now less likely than before to just squander it' (DoF, specialized 1). The composition of capital programmes might be affected: 'I don't really think that the capital charging system is really an encouragement to invest in as wide a range of assets that previously hospitals felt free to do. So I think there's more of a conscious effort to look more at the core businesses that the hospitals are trying to provide' (DoF, acute 4).

There were complaints from providers about contingencies being held both by ME(S) and by HBs, and then distributed before the year end: 'I'm not going to spend it and then incur future [capital] charges unless it's a correct decision for us. I'm not going to incur £100 000 a year costs in the future just because someone wants to off-load some money' (DoF, acute 5). A continuation of such contingency holding will lead *either* to providers carefully planning ahead what their requirements are likely to be so that they are ready to respond quickly *or* to providers refusing the extra capital money so as not to increase their capital debt on unnecessary items. However, cases were cited in the interviews of projects which had recently gone ahead without proper regard to the capital charges implications. There was awareness of the point made by Mellett (1990, p 282) that 'the acquisition of an asset, while benefiting an individual manager, may have a detrimental effect on the organization as a whole'. In some cases, it can be difficult to locate responsibility even for recent capital investment decisions; institutional structures and jobholders have both changed, and there were sometimes hints that 'political' considerations figured prominently in behind-the-scenes decisions (DoF, acute 6). Managers may therefore be, and also feel, less responsible for changes in the configuration of assets than a formal characterization of roles within the internal market would suggest. The repercussions of such decisions can take a considerable time to flow through, as when new developments (in some cases, ministerially imposed on a reluctant HB when it was an integrated body) now pre-empt money in purchasing budgets.

There are two separate issues which need to be carefully distinguished. First, the reluctance to engage in year-end sprees encouraged by late release of additional capital monies can

be viewed as an unequivocal benefit of capital charging. Second, there may be reluctance to embark on large projects, supported only by declarations of 'purchaser commitment' which cannot necessarily be relied upon. As yet, it is unclear whether any such reluctance is a long-term phenomenon or just a 'taking-stock' phase, a sensible precaution by new management teams wanting to explore non-capital intensive solutions before committing themselves. Mayston (1993) noted the implications for providers of the absence of long-term contracts within the internal market. If such hesitation proved not to be temporary, ME(S) would find it much more difficult to manage the health capital programme which has to compete for funds against other Scottish Office programmes. Underspensing on capital programmes has serious implications, such as weaker claims for funds in later years and ministerial discomfiture about falling capital spending. Paradoxically, a number of the first and second wave Trusts had been encouraged to apply for Trust status in the expectation of enhanced capital spending approvals.

The need to remedy construction defects in the inherited estate features prominently in the capital planning concerns of several providers. A considerable number of hospitals suffer from construction defects, often attributable to attempts by HBs to secure reductions in the original capital cost. One acute hospital has a metal roof which has deteriorated due to the exposed coastal location (DoOE, mixed acute/community 2). Brick cladding is falling off another due to defective adhesive (DoF, acute 7). The laboratory block at a third is a steel-framed building coated in asbestos which will cost £4.8 million to remove: 'If the building which we had inherited had been of a much sounder construction, then we probably would be avoiding a major part of the capital investment – I think that's down to fate, I don't know if there's a way round that' (DoOE, acute 8). A fourth has a roof which is structurally unsound and must be replaced: 'There is a major problem, a structural problem with the roof which presently leaks and there are buckets standing in ward corridors and stained wall patches. There has been an ongoing programme over the last few years of patching, constantly patching. If you patch here it breaks [out] there' (DoF, acute 9). Since becoming Trusts, providers with these problems have unsuccessfully contended that they should not

be held responsible for pre-existing defects and that these should be remedied without increasing their debt or capital charges.

Asset disposal programme

Of all respondents, 54% affirmed that use was made of capital charges information for decision-making on asset disposals. There was a general awareness that capital charges had been conceived of in part as a means of promoting estate rationalization. Providers with buildings surplus to requirements identified that 'there is a capital charge to be incurred' and hence 'it is very much in our interest to expeditiously dispose of it' (DoF, community 1). 'I've got this and I'm being charged with this amount, I don't really need it, how do I get rid of it? More than in the past I think that capital charges have made a contribution here' (DoF, community 2). The interviews produced no extreme examples of decisions along the lines of Mayston's (1990) 'perverse incentives, such as the incentive ... to remove factory roofs in order to reduce the capital charge'. Some providers with large amounts of land were in the process of, or planning on, 'getting rid of large tracts of land, rather than just skimming off little bits and pieces of disposable land' (DoF, specialized 1). It can come as a sudden realization that there is an opportunity for cost reduction: 'Crikey, our capital charges are costing us a lot of money. How can we use our estate more efficiently?' (DoF, mixed acute/community 3).

The desire to dispose is partly shaped by the way in which the construction type and material of a building affects DRC valuation. This method can lead to exaggeratedly high valuations when existing hospitals have characteristics which would be expensive to replace but which would not be replicated; sandstone psychiatric hospitals and multi-storey acute hospitals are excellent examples. They incur a high valuation, and therefore high capital charges, because DRC values are based on the replacement cost of like-with-like, even though this may be an out-of-date design which actually incurs operating cost penalties. Moreover, the disposal value of a hospital can be as low as 10–20% of DRC. The same applies to interiors: 'you're not going to rebuild with a corridor twenty feet wide and twenty feet high' (DoF, acute 10); and 'If it wasn't for the fact we aren't allowed to insure, the

best thing would be for it to burn down' (DoF, acute 11).

The configuration of the inherited capital stock is also vitally important. In the case of a single-building provider (e.g. a multi-storey acute hospital or a mansion-type psychiatric hospital) which has excess capacity or capital charges that are so high that they render the provider uncompetitive, there is very little that can be done, short of total closure. Closing part of the hospital (e.g. a ward on the top floor) would lead to almost no reduction in capital charges or maintenance: 'There isn't any point in us closing wards as this would increase the charges on every other ward' (DoF, acute 11).

Much more flexibility is enjoyed by a provider with multiple buildings on a single site (e.g. a pavilion-type psychiatric hospital or an acute hospital with different blocks for different specialities). Peripheral buildings can be demolished and services contracted to part of the site. Demolition may be seen as the best option because capital charges are paid on closed blocks: 'if you've got something that you don't need and you've got a capital charge, and you can knock it down, then you're going to knock it down' (DoF, acute 12). In most cases where they have closed blocks, providers have made a 'management decision' to keep them heated and weatherproof rather than let them fall into disrepair. This is viewed as an obligation to patients in neighbouring buildings, as protection against vandalism and as a safeguard to the value of the buildings. 'So at the end of the day actual maintenance costs for closed-down blocks are not desperately less than for open blocks' (DoOE, mixed acute/community 4). Demolition removes all maintenance and capital charges, though it may bring large asset write-offs. In particular, demolition of buildings in serious need of repair can be used as a way of simultaneously eliminating excess capacity and backlog maintenance. Such opportunities extend to buildings not used for patient care which are now viewed as non-revenue earning. Nevertheless, there may be additional operating costs associated with having multiple buildings, notably the inefficient use of staff time. In the case of acute providers, many link corridors are needed to transfer patients between specialities and central facilities. 'It would be very nice if we could link everything up like the [name of link corridor] which was built in the last twelve

months, that is a major boon, that means you can go virtually from A&E right the way down to the far end of the central medical block, whereas before you used to be running across the road in the snow ... linkages are the main thing now' (DoF, acute 13).

A third kind of provider – one with multiple sites – encounters both potential advantages and disadvantages from this status. On the one hand, the closure of an entire site can lead to substantial reductions in capital charges and in other operating costs, provided that the customary political and media opposition to hospital closures can be overcome. On the other hand, relative to single-site providers, a multi-site provider may not be able to reap those economies of scale (such as on boiler, laboratory and radiography facilities) which are available from single-site operations.

There are three other factors which can dramatically affect the context of asset disposal: the physical configuration of the existing estate; listing; and decisions taken prior to vesting. First, accidents of history can have important consequences. The ideal situation is to have a site where those buildings that have long-term use are clustered on one part, thus allowing orderly contraction to a reduced area and the adoption of a systematic disposal strategy. The worst situation is to have the best buildings scattered across the site.

Second, providers may be handicapped if some buildings are listed, thereby limiting their ability to restructure the estate (Catt, 1991; Scanlon et al, 1994). Many Victorian hospitals have been listed, causing major headaches to their owners: 'Our biggest problem is everything is listed' (DoF, specialized 3). '[Listing] makes any form of conversion additionally difficult and additionally expensive and no prospect of clearing the site and selling the site with planning permission along with it' (DoF, mixed acute/community 1). Paradoxically, the present situation will encourage Trusts to move out of those listed buildings which, though characterized by less than ideal functional suitability, serve reasonably well as hospitals. As a consequence, the listed buildings may be left boarded up and vulnerable to deterioration.

Third, the extent to which disposals now have to be made clearly depends upon the nature of the assets that were transferred at vesting. Trusts in Scotland were not given the option of refusing to take on ownership

of particular hospitals, with the exception of hospitals for which there were firm plans for closure. Some Trusts were able to obtain a 'rental agreement' (DoF, community 2) with their purchaser, dividing capital charges between the two parties until such time as the hospital closed. Others had less success: 'We tried to persuade the purchaser that when we split to become a Trust, to retain one or two of the sites, given that they've got no long-term prospects, and to lease or rent them back to us but nothing doing' (DoF, mixed acute/community 1). 'When we went Trust our main strategy was to indicate that [name of acute hospital] as it stood would close as quickly as possible. And we didn't want to take the hospital, we actually wanted to work out some kind of lease arrangement with the Health Board but we were told that, no we actually must take it as it stood. So we ended up technically with an eleven million pound asset on our books that we were wanting to write off over a period of two to three years' (DoOE, acute 14). There appears to have been some discretion exercisable by HBs, though the practice of retention and leasing was discouraged by ME(S). Of major significance is the fact that some third (1 April 1994) and fourth (1 April 1995) wave Trusts managed to have some of their operational buildings substantially written down prior to vesting. Such Trusts typically had their management teams in place sufficiently far ahead of vesting for decisions about future operational needs to have been more clearly formulated than had been possible in the first two waves (1 April 1992 and 1 April 1993). This constitutes a serious departure from a level playing field, because some Trusts have, for identical assets, a lower originating debt.

The managerial incentives are difficult to analyse. There are incentives for present managers to favour a demolition option, possibly irrespective of long-term needs, whether their own or those of other parts of the NHS. Asset write-offs complicate the picture. Providers who judge themselves unable to withstand write-offs may hold on to unsuitable buildings rather than incur these write-offs: '[name of sandstone psychiatric hospital] is just a millstone round my neck ... I want to knock the thing down, but where's the incentive in capital charges - "oh, knock it down but we're still going to charge you for the next 30 years" ... I have lots of things I want to get rid of. I am waiting to get rid of it, yes in revenue

savings that's where it looks good, but in doing so I am still going to end up with the Namibian National Debt!' (DoOE, community 2).

Maintenance programme

Given the intellectual origins of capital charging, interviewees as a whole reported little impact on maintenance decisions. Surprisingly, only 32% of all respondents indicated that capital charges information was being used as an aid to management decision-making on the maintenance programme. Concerns about an inadequately maintained capital stock were central to the debates which preceded the adoption of capital charges (Davies, 1983; Meara, 1991). Capital charges can pull both ways regarding maintenance: first, buildings that are better maintained to make them last longer remove the necessity for new build; and second, better maintained buildings may attract higher valuations and thus higher capital charges, thereby rendering that provider less price-competitive. The corollary is that badly maintained buildings may lead to lower valuations by the District Valuer and hence lower capital charges (Heald and Scott, 1995).

The findings on the limited impact of capital charging on maintenance may be partly attributable to the downgrading of the estates function. This downgrading was marked by many early retirements, by the exclusion of the 'head of estates' not only from the Trust Board but also from key management committees, and by the appointment of new estates staff at a significantly lower level. Those managers representing estates in top-level deliberations were often not estates specialists and often had multi-functional commands. Even in the Operations & Estates job category, only 43% of respondents affirmed the relevance of capital charging information to maintenance decisions. It seems likely that this downgrading of estates has contributed to the surprising detachment of capital charging and maintenance: 'I believe that Directors of Finance have deliberately kept the estates people out of it - quite deliberately ... I've not been trained on capital charging - I've said to [the Director of Finance] I'd like to find out more about it so I could understand it but it hasn't happened. They have in my opinion deliberately kept [estates] away from it ... I've never been at any discussion on capital charging' (DoOE, acute 10).

Those providers faced with hospital closures

did identify the reduction of maintenance as a priority: 'we're really spending maintenance money to keep ourselves out of jail [i.e. avoid prosecution] ... If it's not broken, it doesn't get maintained' (DoF, acute 15). However, as another interviewee noted, 'there is a very difficult balance actually to construct there between new investment on the one hand and perhaps investing enough that helps maintain the morale of the staff who are working in the [name of acute hospital scheduled for closure] as an institution' (DoF, acute 16). This desire to economize on maintenance on sites with closure timetables was seen by interviewees as simply a matter of good practice, though one on which capital charging had focused minds. One interviewee castigated the misdirection of maintenance money to keep old buildings going to the neglect of newer buildings: 'you look at your long-term buildings that you're going to need for your business plans which [are] basically your newest assets, and you go in them, and your blood pressure goes up because you see they're not being maintained, they're not being looked after ... they are totally wasting their time in the old bits' (DoOE, community 3).

In a few cases, there may have been a deliberate neglect of maintenance prior to the reconfiguration of hospitals into Trusts, when it was known that certain hospitals would be detached from the existing DMU (OA, mixed acute/community 5), and transfers of equipment made to benefit favoured hospitals (DoF, mixed acute/community 1).

The link between equipment and maintenance and replacement had aroused greater interest. Some providers reported that they had a large number of fully depreciated equipment assets. Fully depreciated equipment assets do not incur capital charges and so are 'free' assets if they can be cost-effectively kept operational: 'you have got an [equipment] asset that is fully depreciated, and if you can fully use that ... through a policy of effective maintenance rather than buying a new asset, the real incentive is to actually hold on to the increased maintenance profit rather than going out and buying a new asset and then bringing in capital charges again' (DoF, community 1). Another interviewee expected this to happen: 'We haven't yet faced this but I am envisaging that when an asset is approaching the end of its perceived life I suspect that there will be a tendency to want to keep it going - let's

repair a bit here and there - let's see if we can extend its useful life a bit longer. I imagine that might happen, but I haven't yet experienced that ... I am told it's not unusual within the health service, to find that assets do tend to manage to survive much longer than the initial perceived useful life' (DoF, acute 2).

Contract pricing

Although 70% of respondents affirmed the relevance of capital charges information to contract pricing, it was on this response in particular that respondents were keen to qualify their answers, emphasizing that they were speaking about how the contracting system would develop. Contract pricing is the link between purchasers (currently funded to pay capital charges on a mixed reimbursement/weighted capitation basis) and providers (whose actual capital charges are strongly influenced by inheritance). There is a substantial irony in that capital charging, advocated as a method of improving decision-making, was dominated over the period 1991-1994 by financial accounting requirements, such as avoiding audit qualifications on Trust annual reports, preparing the financial pro formas which DMUs aspiring to be Trusts had to complete, and preparing monitoring returns to ME(S). Indeed, the interviews revealed that the concerns of providers with capital charges were orientated much more towards ME(S) than towards purchasers. However, it should be remembered that this was a period of organizational turmoil and of extensive recruitment of finance staff from outside the NHS, meaning that other tasks had priority.

Purchasers can adopt one of two stances when asking their providers about capital charges: first, assume capital charges are something they have no control over and just ask for notification of the relevant totals and pay them as a lump sum; or second, start demanding to know capital charges by speciality by site. Most purchasers asked only the first question of providers: 'Boards have been the slow ones to move on pricing and until you move over to a cost per case contracting basis, capital charges probably won't work' (DoF, acute 11). An HB can use other revenue money to cover a shortfall between the capital charges allocation received from ME(S) and the actual capital charges of its providers; such a shortfall would occur if the HB were a loser under

the moves towards full weighted capitation. Provided that any such excess capital charges are relatively modest in relation to total revenue allocations, HBs can cushion providers. '[Capital charges] at the moment are sort of wooden dollars, capital charges aren't real money. We just tell them what the capital charges were and they pay them. Tell them what revenue charges are and they start haggling about that – they can't afford it' (DoF, acute 11). Nevertheless, most providers considered that capital charges had impacted on contracting in the sense that they had to be included in prices in order to be recovered: 'I think the fact that there is such an awareness now of the impact of capital charges on contract values means that it can't avoid being part of the decision-making process ... I am very aware of business managers anxious to determine the impact that capital charges will have on the necessary contract prices to recover those costs' (DoF, acute 2). Interviewees were conscious that the existing facilities had been constructed by the parent HB with which a contracting relationship was now being developed – this was seen as a useful argument in contract negotiations.

There was a measure of detectable frustration on the part of many providers that their main purchasers were not ready to address capital charging issues, a consequence, in the view of interviewees, of a lack of development of the purchasing role. This supports Hunter's (1994) observation that 'there is a perception that the purchasing role is little understood and that providers have received more favourable and sustained attention'.

Given that capital charging was intended to promote competition in the internal market, it should be noted that some providers were advantaged by their inherited capital stock and the valuation put on it, whilst others were disadvantaged. In competition for contracts there would not be a comparison of like-with-like. Competition with the private sector would also be affected: 'We're supposed to compete with the private sector, but we're operating with 150-year-old buildings and they're operating with two-year-old buildings' (OA, community 4).

Budgetary devolution

There is an extensive research literature on the successive efforts to devolve budgeting in the NHS; from the Griffiths-inspired Clinical

Management Budgeting (CMB) in 1983–1986 (Perrin, 1988) through Resource Management (RM) over the period 1986–1991 (Buxton et al, 1991) to RM within the context of the internal market (Williamson, 1991; Rea, 1994). The process of implementing reformed budgetary systems has undeniably been slow. Only 37% of all respondents affirmed that capital charges information was being used for devolved budgets to functional budget holders; exactly the same percentage reported use for clinical budgets. However, the responses for DoFs were significantly higher in both cases (53% and 56%), differences which the interviews suggested were attributable to the latter's responses being strongly influenced by prospective uses.

Where devolution has been achieved, this is at an early 'shadow budget devolution' stage (DoF, specialized 2), in effect a trial run for the real thing expected to come the following year. Often capital charges data have been included in budget statements but directorates are not yet made responsible. Most providers are currently involving clinical directors in the ownership of assets or are in the process of developing this level of devolution. 'We haven't devolved capital charges down to those budgets yet, but I'm sure we will. Whether we do it on a staged basis by putting equipment out before we put out the buildings, I don't know, because I think the equipment is the more important one and that is the area where the individual manager can actually influence investment decisions' (DoF, mixed acute/community 3). 'We will be identifying capital charges as an element of individual operational budgets for directorates. It will probably be done in an extremely clumsy fashion which will no doubt be challenged every month but at least it will be there. And it's part of this perception process that people begin to realize that there is a very, very significant cost element in what they do in the hardware that they're using and to wean them away from the "well, it's written off so I'd better have a new one" concept to the "well, has it or has it not reached the end of its economic life?"' (DoF, acute 6). The devolution of capital charges makes substantial demands on recording systems: 'We know precisely where the hardware belongs but, inevitably where you've got shared wards and shared facilities, there has got to be an arbitrary split of the costs, and that will probably be done on patient days

or whatever, which is again not a particularly clever way of doing it but we have no other activity-based methodology to allocate these costs' (DoF, acute 6). Some providers were not yet pursuing this path because of difficulties in obtaining disaggregated data from their software packages to enable them to split between buildings and hence directorates: 'it doesn't allow us to do the sort of detailed analysis reports that we'd like to' (DoF, acute 1).

The major area for clinical discretion is seen to be over equipment. Clinicians were said to be showing an awareness of the effects of capital charges on equipment: 'that analyser we asked for at £200 000, we could get by with the smaller one at £140 000' (DoF, acute 10). Community providers have very few equipment assets left under the *de minimis* limit, which was increased in 1993 from £1000 to £5000: 'On the community side there is virtually nothing' (DoF, mixed acute/community 1). A case can be made that, but for the crisis in getting the software to work at all, the increase in the *de minimis* limit was undesirable, exactly because it removed much of the capital assets over which managers and clinicians could clearly be seen to exercise control. '[Equipment] is the real discretionary part of assets' (DoF, acute 11). As budget devolution proceeds, it will be interesting to see whether some DoFs decide to use a lower *de minimis* limit in their management accounts and devolved budgets. Although the questionnaire survey showed strong support (74% as against 13%) for raising the *de minimis* limit, there is no doubt that relief in terms of running the capital charging software figured prominently amongst the motives of those who supported that change. A minority of DoFs strongly dissented: 'I disapprove entirely. My reason is that the assets could possibly walk ... certainly laptops and other fancy microscopes and that - they're the things that go. We should have registers of special equipment. But, if you're going to have a register, you might as well have it as an asset' (DoF, acute 5). 'I know there are lots of Boards and Trusts who've said "we've actually worked our nuts off to get it right, so why have we got to ditch it?" And in fact here, we retained that information ourselves' (DoF, acute 17). One of the managers responding to a crime prevention survey described hospitals as being like 'supermarkets without tills' (Laurance, 1993). Moreover, the consultants who conducted the survey con-

cluded that '[increasing the *de minimis* limit] would intensify the pilfering epidemic' (Horsnell, 1993).

There are important managerial questions to address concerning the legitimacy of capital charging as perceived by clinicians: 'Clinicians ... have a very cloudy perception of what capital charges are meant to achieve ... [they] didn't ask for the facility which is being constructed round about them; they didn't ask to get in a particular part of the hospital as opposed to any other part of the hospital - therefore they don't really feel as if they own space ... So to that extent, the credibility of capital charges is questioned by the clinicians' (DoF, acute 4). Clinical and functional budget holders may consider that it is unfair to capital charge them for an expensive building which they have no desire to be in or for the lift they need because they happen to be on the top floor.

Conclusion

The government's objectives for capital charging were 'increased awareness by health service managers of the costs of capital coupled with incentives to use capital efficiently'; and 'to see the costs of NHS provision evaluated on a basis broadly comparable with the private sector in order to facilitate competition between the two sectors' (Scottish Office, 1989). Whilst the questionnaire survey revealed strong backing for capital charging (Heald and Scott, 1996), the interviews brought to light a number of concerns which, although specific to particular hospitals, raise issues of more general applicability.

The period 1991-1994 was primarily devoted to getting capital charging to work in a technical sense, rather than to promoting the use of capital charges information for managerial purposes. Even in 1994, capital charging had not fully 'bitten', due to partial reimbursement of actuals and to the willingness of HB purchasers to divert other revenue monies to compensate for shortfalls in capital charges funding. This context softened both the desirable and potentially dysfunctional incentive effects. Nevertheless, managers have welcomed capital charging as a business discipline, and capital charges information is already being used in a variety of strategic contexts.

As this article has demonstrated, a fully operational capital charging system will re-

quire much greater clarity in the rules (e.g. on when asset write-offs will be permitted) and a recognition that different providers confront markedly different problems (e.g. the extent of excess capacity and the functional suitability of the estate).

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