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# Should district health boards pay a capital charge?

**Every six months district health boards (DHBs) are required to pay the Government a 'capital charge' on the Crown's capital (equity) investment received by DHBs. The charge, which is currently set at 6% p.a. (see footnote[i]), applies to any DHB operational surpluses as well as any capital funding provided by government. In 2017 this totalled $174.2 million (Table 1). The expectation is that the charges will be funded from DHBs' existing baseline funding. At budget time this means operational funding for DHBs is significantly less, in reality, than is allocated.**

## Table 1: Capital charge and interest on Crown loans for the year ending June 2017[1]

| DHB | Capital Charge ($m) | Interest on Crown Loan ($m) |
|---|---|---|
| Auckland | 39,433 | 7,368 |
| Bay of Plenty | 7,151 | 3,839 |
| Canterbury | 16,177 | 4,055 |
| Capital & Coast | 5,662 | 8,384 |
| Counties Manuka | 18,200 | 7,860 |
| Hawke's Bay | 5,906 | 777 |
| Hutt | 5,863 | 2,227 |
| Lakes | 2,886 | 1,474 |
| MidCentral | 7,748 | 1,605 |
| Nelson Marlborough | 6,418 | 1,633 |
| Northland | 8,067 | 498 |
| South Canterbury | 483 | 253 |
| Southern | 5,042 | 2,471 |
| Tairawhiti | 1,684 | 457 |
| Taranaki | 4,347 | 1,457 |
| Waikato | 15,188 | 5,088 |
| Wairarapa | 381 | 576 |
| Waitemata | 21,560 | 6,532 |
| West Coast | 739 | 343 |
| Whanganui | 1,245 | 967 |
| **Total** | **174,180** | **57,864** |

Source: Ministry of Health 2017

[i] The DHB pays a capital charge to the Crown twice a year on 30 June and 31 December. It was 8% p.a. up to 30 June 2016. It was reduced to 7% for the six months to 31 December 2016, and to 6% for the six months to 30 June 2017.

DHBs have tended to lessen the impact of the capital charge by using a government loan to finance capital projects because it carries a lower interest rate. (In addition to the capital charge, DHBs up until now have paid interest on debt from government loans totaling $57.9 million in the year to June 2017.) But that pressure relief valve was closed off when the Government advised DHBs that as of 15 February 2017, they could no longer access Crown debt financing for funding capital investment. All Crown capital funding is now made via Crown equity injections, and DHBs have been directed to convert their existing Crown loans into equity, thereby making Crown debt financing subject to the capital charge and at least partially offsetting the benefits to DHBs of a reduced capital charge rate.[2]

The fairness and rationale for the capital charge regime, which effectively has the government playing shareholder and banker to DHBs, have come under question, including from the Auditor-General. This paper, responding to the Auditor-General's call for more debate on the matter, looks at the effects of the capital charge on DHB budgets and services, and its unintended consequences. With DHB capital spending needs forecast to exceed $14 billion over the next 10 years, indicating a substantial additional capital charges to come for DHBs, the paper also considers whether the rationale for its use is valid.[3]

## The problem

The effect of the capital charge regime on individual DHBs depends on the relation between their income and the asset base on which they pay capital charges: the greater the proportion of a DHB's income taken up by capital charges, the greater the financial risk to the DHB.

DHBs facing major building costs are especially vulnerable. A PriceWaterhouseCooper (PwC) report on Canterbury DHB's financial difficulties, for example, found that depreciation and capital charges associated with the close to $1 billion of new hospital facilities are the primary drivers behind growing deficits. The impact of the capital charge on the Southern DHB's financial viability is also in question, with the DHB's future building programme now officially estimated to cost up to $1.4 billion over 7 to 10 years.[4] [5]

An underlying issue is that DHBs have limited options for improving their income:asset ratio. By and large, government decides on their income, and since 2009/10 DHBs have seen a significant drop in the value of government funding.[6] Consequently, as the Auditor-General has noted, "There have … been consistently negative levels of retained earnings, suggesting there is little money available from operating surpluses to reinvest in DHB assets".[7]

The Auditor-General has also found DHBs' ability to adjust their net assets is limited "because DHBs have little surplus assets to make a capital repayment (such as cash) and their larger capital assets (such as hospital buildings or clinical equipment) cannot be easily reduced in size or value".[8]

The Auditor-General's observations that the challenging funding situation is leading DHBs to focus on meeting immediate operating needs, while there is a "consistent underspending against budget for capital expenditure", are reinforced in the Ministry of Health's performance data for the 2016/17 financial year (Table 2).[9]

Overall, capital expenditure was almost $200 million short of what had been planned. Four of the seven listed categories saw less than half of budgeted spending actually spent, including clinical equipment amounted (47%), other equipment (40%), motor vehicles (33%), and software (39%). Spending on information technology, the future use of which is emphasised in the updated New Zealand Health Strategy, was just 64% of what was budgeted.

## Table 2: District Health Board Capital Expenditure for the year to 30 June 2017

| | **Planned ($m)** | **Actual ($m)** | **Variance ($m)** |
|---|---|---|---|
| Land | 0 | 0.4 | +0.4 |
| Buildings & Plant | 438.9 | 411.8 | -27.1 |
| Clinical Equipment | 162.3 | 76.9 | -85.4 |
| Other Equipment | 24.5 | 9.7 | -14.8 |
| Motor Vehicles | 16.5 | 5.4 | -11.1 |
| Information Technology | 42.7 | 27.3 | -15.4 |
| Software | 75.5 | 29.4 | -46.1 |
| **Total** | **760.4** | **560.9** | **-199.5** |

Source Ministry of Health 2017

Finance Minister Grant Robertson says a required capital spend signalled by DHBs of $14 billion over the next decade reflects a long period of under-investment.[10] Concerns about DHB deferred maintenance and under-investment in buildings and equipment had previously been raised in separate reports from Treasury and the Auditor-General. As the latter indicated, DHBs appeared focused "on delivering short-term results within a challenging operating environment and financial constraints," to the detriment of longer-term planning and capital investment.[11] [12]

Under section 41 of the New Zealand Public Health and Disability Act 2000 and section 51 of the Crown Entities Act 2004, every DHB must operate in a financially responsible manner. They must endeavour to cover all their annual costs (including cost of capital) from their net annual income.

Physical assets make up a large proportion of each DHB's balance sheet. In 2016, the three Auckland DHBs alone had $2.4 billion invested in property, plant and equipment. Sound management, maintenance and investment decisions of DHBs' physical assets are therefore critical to the effectiveness and efficiency of New Zealand's future health services.

However, the Auditor-General reported in a 2016 assessment of DHBs' asset management that "DHB asset and finance management practitioners confirmed that immediate financial and operational imperatives sometimes dominate decision-making." Between 2008/09 and 2014/15, internal funding from DHBs' net operating cash flows covered only 55% of their total capital investment needs. Using depreciation as a proxy for how much is being 'consumed', the Auditor-General's analysis also showed that 12 of the 20 DHBs (60%) did not have enough internally generated funds to cover their renewal spending needs.[13]

Further: “Our auditors estimated that [in 2013] more than $300 million of clinical equipment had remained in use past the end of its theoretical useful life.” While only a small proportion of buildings were considered to be past their use-by date, the consequences of not investing in new buildings well before the old ones reach the end of their useful life can be costly financially and in terms of the quality and safety of health care, as is well illustrated in a report on the current state of Dunedin’s hospital buildings prepared by consultancy firm Sapere.[14]

As immediate financial and operational pressures contribute to budgeted capital expenditure being diverted to operational expenditure, at the same time there are strong *disincentives* for DHBs to invest in capital. New and well-maintained assets generally have a higher value than older assets and so incur additional expenses (such as depreciation expense, as well as capital charges). By not spending on building and equipment, these additional expenses can be avoided in the short term.

However, in the longer term (and in some cases the ‘longer term’ is today for some deferred maintenance of the past), maintenance costs become higher. This has been the case, for example, for the Southern DHB, where the Sapere report found financial pressure as a key factor in the ‘false economies’ of patching up buildings on top of earlier patches. Several buildings, including the nine-story clinical services block, were assessed as being at the end of their service life and were in such poor shape that they were unable to be economically ‘re-lifed’. International studies show the cost of deferred maintenance can be many times that of an early intervention cost.

The impact on services can also be costly, financially and in terms of the quality and safety of health care. As the Sapere report found, the “deteriorating physical environment is eroding quality of care, creating safety risks, and causing distress to patients and staff,” as well as causing delays and “leading to an increased likelihood of adverse events for both staff and patients”. Poor maintenance of hospital buildings has been cited as a serious health and safety hazard in the United States and Britain’s National Health Service (NHS).[15] [16]

## Stated reasons for the capital charge

The capital charge was first introduced into central government in the early 1990s as part of a wider policy to emulate market forces within government.[17] A similar capital charge in Britain’s National Health Service (NHS), which was also subject to commercial market-oriented policies, had been introduced in 1991.

In the context of policies supporting competition between public and private sectors (as well as within the public sector), the introduction of a capital charge was seen as a logical move. Bringing public sector capital accounting into line with private sector conventions in respect of returns on capital was an attempt to create a ‘level playing field’ by disguising the most significant difference between the two sectors.[18]

In 1992 a commissioned report (by American-based investment banking firm CS First Boston) to the New Zealand Government on setting up a commercial health system, including the setting up of Crown Health Enterprises (CHEs) in the public sector to compete for government funding with private providers, advised:[19]

*"Several major private health care providers we have interviewed believe there is a significant risk that they will not be allowed to compete on a 'level playing field'. In particular, concern has been expressed to us that public sector providers may not be required to earn a normal return on their (appropriately valued) assets…"*

*"…to ensure neutrality, the CHEs should be required to earn a weighted average cost of capital (return on equity and debt) comparable to that earned in the private sector in activities with similar risk characteristics…."*

*For presentational reasons, the [Government] may wish to describe the dividends paid by CHEs as a 'capital charge'.*

The report also advised that "The process adopted for the establishment and management of CHEs must ensure that managers have incentives to lease or otherwise dispose of surplus assets," and noted that "the rationalisation of public assets may be important in facilitating entry by new providers." The capital charge was seen as a way of providing such an incentive.

The proponents of a commercial model for New Zealand's public health system claimed the capital charge would create remarkable efficiency gains for CHEs, though there appears to be no evidence available to support this. An examination of capital charging as a tool of new public management found that "in practice, they [CHEs} were so financially distressed that they did not actually pay capital charges".[20] Ironically, the charge was not introduced until the market-oriented CHE model was replaced in 1998 by a Hospital and Health Services (HHSs) model, which was intended to be less commercially focused.

Despite the widely acknowledged failure of the market-oriented policies and the return to a more cooperative, non-competing public health sector model in 2001, with the establishment of district health boards (DHBs), the capital charge has remained. The initial rationale for its existence is also fundamentally unchanged.

According to Treasury, the charge is "to ensure that the cost of capital was transparent and taken into account in decision making. It also aimed to ensure public sector outputs were fully costed [ie, including capital costs] and therefore comparable to the private sector."[21] In a report to the Finance Minister in 2012, Treasury advised: "Charging DHBs for the capital they hold supports a level playing field between DHBs and private providers." [221]

Treasury also explains: "Within the public service there is often no market price for the services produced, and consequently there is little competitive pressure to manage input costs. This issue can be particularly severe in relation to capital, which can be viewed as a 'free good' by agencies once provided by government." The purpose of capital charge is to provide incentives for public service agencies to improve their capital management and to dispose of surplus fixed assets."[23] [24]

A further reason for introducing the capital charge, though not explicitly stated, may be politically or ideologically motivated through providing incentives for DHBs to privatise public assets. One way to avoid the capital charge, and depreciation costs, is to sell buildings to private companies and lease them back, or lease new buildings from private owners rather than paying for new ones. Such approaches were advocated by the previous Government, typically through public-private partnerships (PPPs) or private finance initiatives (PFIs). The PwC report on Canterbury DHB's financial difficulties recommended – with the previous Minister of Health's support – a sell-and-lease-back option after finding depreciation and capital charges associated with the close to $1 billion of new hospital facilities are the primary drivers behind the DHB's growing deficits. (Sell-and-lease-back arrangements, however, may now be less attractive options following recent changes to accounting standards.) Meanwhile, consultants have suggested the Southern DHB "will need to be innovative in the way it finds capital to make things happen" with regards to Dunedin's planned new hospital buildings, which are now estimated to cost up to $1.4 billion.[25] [26]

## How is the capital charge rate established?

The capital charge rate is calculated in the same way as the public sector discount rate, which is used by government to 'weight' future costs and benefits when agencies carry out cost-benefit analysis, and to estimate the cost to the Crown of investing in public assets (the capital charge calculation).

The public sector discount rate is calculated through a 'social opportunity cost' of capital approach, whereby public projects are discounted by reference to the rate of return that could be earned from the next best alternative use of public funds. This next best alternative is usually taken to be a private sector project with similar risk characteristics to the public project under consideration.[27] [28]

The main rationale for this is that if the return on public projects does not at least meet the hurdle of the next best rate of return available to the government, then government investment displaces, or crowds-out, an investment that would have generated more overall value.

Currently, a Treasury working paper explains, share market returns are considered to be the most appropriate measure of 'the next best alternative' to the government because, it is argued, the market has incentives to carry out the most productive investments in the economy and these returns are available to the public. In addition, the Government already invests in the share market via the New Zealand Superannuation Fund. Theoretically, it could choose to substitute between this investment and other public projects. However, there is no completely objective way of determining public sector discount rates and, "Despite many years of debate, there is no consensus on this topic, either in academic research or in policy guidance." [29]

## Arguments against the capital charge

The underlying reasons for introducing the capital charge - to allow comparisons to be made between public and private providers, and to improve cost effectiveness - rely on two arguable premises. The first is that the charge realistically represents the cost of capital to the Crown; the second is that a public health service provider is sufficiently similar to a private enterprise that the imposition of a private sector financial regime would lead to greater efficiency.[30]

On the first, it is argued that the capital charge does not fairly represent the cost of capital to the Crown. The Government on the whole has two sources of capital: taxes and debt. The administration cost of collecting taxes has been consistently less than 1% of net revenue collected, while government costs of borrowing are typically lower than private costs of borrowing, given its implicit taxpayer guarantee, and generally reflect New Zealand Government Bond rates. In January 2018 the 10-year Government Bond rate was just under 3% - or half of the reduced capital charge rate of 6%.[31]

As explained above, the capital charge is set by reference to the rates of return that the government could hypothetically earn by investing public funds in private investments (eg, the share market), rather than directly reflecting the cost of capital to the Crown. But, leaving aside questions of political ideology, it is considered unlikely that a government would be willing to substitute between public service delivery and private investments. Theoretically, a more feasible measure of opportunity cost would be defined by reference to an alternative method of delivering a comparable service. This may be possible where there are well defined private alternatives, but this is not the case for most social sector services in New Zealand, including most public health services.

For these reasons, a working paper examining public sector discount rates, published by Treasury, suggests the social opportunity cost approach to discounting which determines the capital charge rate may not be appropriate to apply to social services and is likely to overestimate the rate.

If the capital charge does not reflect the real cost of capital to the Crown, then its purpose of allowing comparisons to be made between the full costs of output production between the public and private sectors is comparing apples and oranges.[32]

The Auditor-General has drawn attention to a paper citing "great difficulties [that] arise in applying a system of real capital charges within the core government on capital charges and capital spending decisions". These difficulties included: [33]

- imperfect information about the quantity and quality of each output and whether an efficient production cost can be calculated;
- the relatively fixed and consistent nature of the capital charge in an environment of uncertainty;
- conflict between two different approaches to managing entities' balance sheets in a decentralised context– a capital charge regime (a price-signalling approach) and ongoing centralised capital rationing (a quantity-rationing approach); and
- the potential bias of entities towards projects that improve cost efficiency, which helps offset the capital charge, rather than those that improve the quality of services, which does not.

Most significantly, the intended incentives for efficiency to be achieved by capital charges have not been realised; in fact, the evidence indicates the capital management has become more *inefficient* as discussed below.

## Questions of efficiency

The Auditor-General's 2016 report assessing DHBs' asset management found:[34]

- About two-thirds of DHBs are unlikely to have substantively updated their asset management plans since 2009.
- DHBs tend not to specify the levels of service they expect from their assets. As a result, reporting on asset performance is generally weak.
- Many DHBs have asset management information systems with advanced functionality but often do not use the full range of that functionality.
- DHBs generally do not systematically collect, maintain, analyse, and use asset information – such as about age, condition, and performance – particularly for clinical equipment.
- More than half of the DHBs do not regularly reconcile the information held in their asset management and financial information systems.
- There is limited reporting to governors and senior managers about asset performance and condition.

The Auditor-General also reported:

> *We looked at measures of capital expenditure management drawn from DHBs' financial statements from 2008/09 to 2014/15… For all the seven years we reviewed, fewer than half of the DHBs had indicators at levels that I would characterise as representing good financial and asset management….*
>
> *These results lead me to question how well positioned DHBs are to support future service delivery. Our audit work since 2009 shows a sector strongly focused on delivering short-term results within a challenging operating environment and financial constraints. But I am concerned that DHB asset management does not seem to have gained much traction in this time.*

Two months after the publication of that report, the Auditor-General's audits of DHBs in 2014/15, which included an in-depth look into the state of DHB assets and the approach that DHBs are taking to manage them, was presented to Parliament and questioned whether the capital charge regime was actually achieving anything other than contributing to DHB financial pressures.[35]

As discussed above, deferred maintenance leads to greater costs down the track. The literature indicates a 'rule of thumb' 1.5% of the current replacement value of a building should be spent on maintenance per year but in some cases may need to be as high as 4% per year.[36] These costs of deferred maintenance have been estimated in the education sector in the United States to be four times higher overall than the cost of timely and regular maintenance. Some cost estimates have been estimated to reach potentially 15 to 30 times higher.[37]

In addition, poor hospital maintenance can also impact on the efficiency and safety of day-to day services. The Sapere report on Dunedin hospital summarised the physical conditions:

> *Hospital facilities in Dunedin are not just in poor shape but in some instances are crumbling. The major issue is around poor layout, flow, and condition of the current facilities, thereby making it difficult for the DHB to run efficiently or deliver contemporary care to patients. The inflexible and inappropriate nature of the current facilities directly leads to increased costs, reduced service capacity, reduced productivity, and poorer patient outcomes.*

The report also noted: *"A combination of building layout, patient flow and building condition mean that adverse events relating to delirium, infections, and falls are more likely."*

The literature strongly indicates poor maintenance can lead in particular to increased incidence of hospital-acquired infection, whether it is through damp and mouldy buildings such as revealed at Counties Manukau DHB in numerous media reports over recent weeks, or poorly maintained heating, air-conditioning or water systems. According to one report on Britain's NHS, patients with a hospital-acquired infection on average remain in hospital 2.5 times longer than an uninfected patient and incur hospital costs that are almost three times greater. [38] [39]

## Discussion

The evidence discussed in this paper indicates the capital charge regime is providing incentives for the privatisation of public hospital assets. While this was originally intended in the context of explicit market-driven health policies of the 1990s, the intent today appears to be more related to cutting current government spending and forcing DHBs to turn to private investors to either partially or fully finance impending capital projects such as through public-private partnerships (PPPs) or private finance initiatives (PFIs). This has been seen as a form of privatisation by stealth. It is beyond the scope of this paper to examine these financing approaches but an examination by the National Audit Office in Britain, where they have been used extensively to fund capital projects in the NHS, found the longer-term costs of PFI-funded hospital building projects can be up to 70% higher than solely government-funded projects.[40] Some estimated long-term costs of PPPs/PFIs are multiple times the estimated cost of government-funded projects. PPPs have also faced a large number of contractual problems; these and the costs of bailouts and contract terminations have been estimated to cost British taxpayers a conservative £3.7 billion (and still rising).[41] PPPs and PFIs have played a significant part in the NHS's current financial crisis, which is why New Zealand's current Government has rules out their use here.

The evidence on the other stated intent of the capital charge – to achieve greater cost efficiency in the management of health service capital assets – indicates the unintended consequences of the policy are resulting in not only significant *inefficiencies* in capital management but also inefficiencies and safety risks in service delivery. Further, these inefficiencies and safety hazards are worsening with time. DHBs are caught in a negative spiral where the capital charge on top of depreciation costs is contributing to financial pressures that are forcing them to defer maintenance, leading to service inefficiencies and increased capital costs – and additional capital charges – down the track.

Following the Auditor-General's questioning of the use of the capital charge in 2016, then-Opposition health spokesperson Hon Annette King said 'reform' of the capital charge regime was 'imperative', pointing out that "around the world capital charges have been abolished on health funding".[42] In March 2017, current Health Minister David Clark was reported as saying the capital charge regime had not worked well in the health sector. "It's transpired the DHBs don't always behave as Treasury might have [expected]."[43]

On the weight of evidence, and considering the potential impact of the looming capital charge costs indicated for the next decade, there is a compelling case for the immediate abandonment of the capital charge against DHBs.

Further, the shortcomings in DHB capital management identified by the Auditor-General (and similar shortcomings have been identified by Treasury) also require urgent attention.

The Auditor-General has observed:[44]

> *"Too few people have the skills for preparing robust business cases, and the unpredictable availability of capital funding makes it difficult to set up core capacity. This means that decision-makers rely heavily on consultants, advisors, and experts." (Ref assets management report 2016).*

And Treasury, in its *Briefing to the Incoming Minister* in 2014, commented: [45]

> *"Planning and building major hospital infrastructure is not consistently part of the core business of DHBs and, as the Auditor General has observed, there is a shortage of people in New Zealand with the skills needed to prepare business cases and manage and govern large capital projects. Repeatedly contracting out these functions is expensive and means that experience gained on one project is not retained and transmitted to the next… so management and oversight should be centralised."*

Currently, a Capital Investment Committee (CIC), whose members are drawn from the public health sector management and private commerce, is responsible for advising the Minister on capital spending priorities nationally. But this has been criticised for being slow and cumbersome from the DHB sector. The Auditor-General noted, "Slow progress on a National Asset Management Plan and gaps in the base information from DHBs and private health-care providers made it difficult for the Capital Investment Committee to prioritise spending." And the CIC reported difficulty with setting priorities for investment without a long-term service plan for health.[46]

Treasury recommended an 'external partnership' group working collaboratively with DHBs to oversee major capital projects, coupled with support from the centre, such as is used in Christchurch and the on West Coast. However, this approach appears to be simply a variation of a PPP and has come under heavy criticism from the community and clinical staff for lack of consultation, lack of transparency and 'flawed' decision-making. Recent media reports have revealed the Christchurch Hospital redevelopment offers fewer than half of the number of extra beds promised.[47]

A more radical proposal suggested by some commentators is to place the ownership of DHB hospitals into a central Crown agency with the necessary governance and capital management expertise. It would receive capital funding for new hospitals, bear the costs of depreciation, and would be responsible for long-term planning for public hospitals. The critical aspect of such a proposal would be a process of thorough and robust engagement with DHB boards, clinical staff and the community, providing needs assessment plans. In essence, it would be a partnership bringing together the experts in capital management and planning with the experts in health care and the knowledge of those who receive the care, backed by the government as funder.[48]

The seriously deteriorating state of some of public hospital buildings revealed through many media reports, along with forecast capital spending needs, calls for not only an urgent debate on the impact of the capital charge on DHB finances and services, but also on the way our public health service capital assets are planned and managed.

## Conclusion

The capital charge on DHBs is creating inefficiencies in capital management leading to significant additional costs and safety risks in service delivery. The capital charge is also leading DHBs to turn to private funding to either partially or fully finance impending capital projects such as through public-private partnerships (PPPs) or private finance initiatives (PFIs), which have been shown overseas to lead to crippling long-term costs to public health services.

To avoid these additional costs to a health services which are already struggling to meet increasing health needs, the capital charge should be abolished, and loan funding from the Crown reinstated.

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