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Organising Project Finance

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4.1 Introduction

Project finance refers to the practice of financing capital projects via their associated projected cash flows and collateralisation of the underlying asset without recourse to the balance sheets of their sponsors. This mode of financing, which is different from corporate finance, has historical antecedents in the early modern period and even in antiquity. It came into its own in the fourth quarter of the twentieth century as projects were increasingly recognised as making a significant contribution to economic activity in the financial sector. Modern project finance is, thus, understood as a method of finance, whereby the borrower is generally a standalone corporate entity, often a special purpose vehicle (SPV) and, therefore, a single-project enterprise. This entity raises equity that together with the project loans provides the finance to create project assets, which can be used to generate cash flows.

The assets are, however, usually highly specific without a ready secondary market. Project loans are, therefore, secured on the operating cash flows rather than the assets themselves. Additionally, lender's intervention rights are written into loan agreements to ensure that the project proceeds to plan and that cash flows are generated in the event of default by the borrower – particularly during the asset creation phase of the project. The advent of large-scale securitisation of project finance debt instruments helped to attract significant institutional capital, which had shied away from infrastructure debt because of the risk/return profile. This chapter argues that despite what some economic theory might predict, the manner in which a project is financed imposes formal 'constraining and enabling' conditions at all phases of the built-asset lifecycle (Cardinale 2018). Successful project organisation and delivery depends upon an adequate understanding of these dynamics.

In contemporary UK Private Finance projects that create new infrastructure facilities, there are fundamentally two types of arrangement. In the first, the SPV creates and operates the whole facility and its designated activity such as a prison. In the second case, the SPV creates a facility but operates only the facility alongside the main sponsor organisation, which

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operates the designated activity such as a hospital. In both cases, the contractual operating period is normally for a period of 25–35 years before the facility and its ownership is returned to the state. In the former case, the commissioning government department acts as the sponsor and the SPV carries out the full client role. In the latter case, the parent government department and the activity manager (such as a National Health Service [NHS] Trust) acts as the sponsor as well as the client role in briefing, outline design, and operation. The SPV acts as a client in the later design, procurement, and construction phases as well as post-completion facility management.

4.2 Economic and Finance Theory

There are two distinct strands of economic theory, which furnish a basis for arguing that choices in financial structures produce differences in project organisation, project delivery, and the associated welfare outcomes. How far theoretical justifications for project finance survive empirical investigation turns on the assumptions made about the viability of alternatives, whether on-balance corporate financing of built assets or traditional public procurement, and ultimately upon assessments of project value. As illustrated by the Peterborough City Hospital case, the manner in which a project is financed not only constrains and enables project organisation, but, as Cardinale (2018) predicts, also serves to actively orient the organisation of the project.

4.2.1 The Basis of Project Value

Before a project can be financed, it must be evaluated to determine the project value. Compound interest had been understood for hundreds of years, but it was not until the sixteenth century that systematic treatments of present value were published (Trenchant 1561; Stevin 1582). Discounted cash flow came into regular use for evaluating industrial projects in UK coal mining during the period 1772–1810 (Brackenborough et al. 2001). Economists eventually took this up culminating in the work of Fisher (1907, 1930) who provided the general type of formula that is now used evaluating net present value (NPV) and other valuation indicators.

The standard format for evaluating projects is the calculation of NPV represented by

$$\mathrm{NPV} = \sum_{t=0}^{n} \frac{V_t - C_t - K_t}{\left(1+r\right)^t} - K_o$$

where t is the relevant project period, n is the project length, V_t is the period revenue, C_t is the period operating cost, K_t is the end of project remediation and restoration cost, r is the discount rate, and K_0 is the initial capital cost.

4.2.2 Sources of Forecasting Error

Forecasting is required to estimate the project value. Simon (1947) challenged the idea that we are fully rational decision-makers because of our cognitive limitations, which he called

'bounded rationality'. Tversky and Kahneman (1973, 1974) and Kahneman and Tversky (1979) show that people often make irrational judgements about extreme or rare events either because of: (i) falsely overestimating the significance of certain characteristics of the forecast situation, or (ii) by unjustifiably relying on heuristics or past 'rules of thumb', or (iii) by mis-specifying the forecasting problem, or (iv) by misinterpreting cause and effects from regression data, or a combination of these. Moreover, constructed assets fall within a category known as complex products and systems. This itself gives rise to problems in project organisation (Hobday 2000). A physicist has suggested that complexity itself provides problems in forecasting (Grassberger 2012).

As a consequence of this, more complex methods of forecasting have been devised. However, practice shows that these frequently add little value to the forecast but are often used to justify or even 'reassure clients through incomprehensibility' (Green and Armstrong 2015). Those providing forecasts are often not accountable for errors, and project input data may be intentionally misleading in order to ensure that a project goes ahead (Flyvbjerg et al. 2003). It is, therefore, likely that there may be substantial underestimates of capital costs, and this is borne out by Mott MacDonald (2002), Flyvbjerg et al. (2003), and Merrow (2011) for both the public and private sector projects. Recognition of this is important as forecasting errors in demand for infrastructure assets can significantly undermine their business case and ultimately their financial performance.

4.2.3 Why Do Firms Exist?

To understand the economic logic for creating separate project enterprises, it is first necessary to consider why organisations, particularly firms but also including separate project organisations such as SPVs, exist at all. Economists were surprisingly slow to address this issue in depth. Coase (1937) pointed out that all firms effectively suppress the price mechanism because information, search, negotiation, contract, and repeat costs for certain types of market transactions (augmented due to risk, uncertainty, and asymmetry of information) exceed the costs of eliminating or minimising them (transaction costs) through internalisation within a single organisation. This is a particular issue where stability of long-term supply and distribution networks is required. The extent to which the firm as a form of organisation promotes productive efficiency depends on the nature of the economic activity undertaken.

The application of Coase's theories to explain the development of SPVs to deliver infrastructure assets is a natural step, one which project finance can be said to facilitate, despite the transaction costs associated with the establishment of the SPV. Debates about the nature and the boundaries of the firm also naturally lead to questions of maximum efficient scale and scope of a given enterprise. Thus, it is reasonable to suppose that the choice of project finance can affect not only productive efficiency, but also allocative efficiency, and thus attendant welfare outcomes. This form of project organising can give rise to agency costs within a firm and between different parties such as owners and managers.

4.2.4 Managers vs. Owners and the Basis of Firm Value

The problem of managers potentially acting in their own interests to the detriment of the wider ownership of the firm was noted as far back as Smith (1776/1982) and later by Berle

and Means (1932). Jensen and Meckling (1976) note adopted solutions such as 'bonding costs' (such as commitment to significant share ownership) incurred by managers to disincentivise their own potential misbehaviour and monitoring costs incurred by shareholders to detect and/or limit managerial misconduct (such as external audit and board committees). In spite of this, 'residual agency costs' may still occur.

Projects involving the creation of large physical assets are likely to generate large cash flows, which offer an opportunity for managerial misconduct. Esty (2003) notes that having a single-project company with a relatively high level of debt acts as a deterrent since a significant portion of the cash is earmarked for debt interest payment, and the lack of other projects makes the remaining cash easier to track. Additionally, the existence of a single-project company acts as a deterrent against strategic opportunistic behaviour by suppliers or joint owners such as the 'hold-up' problem, whereby firms needing to cooperate are wary about moving first in incurring otherwise irrecoverable expense, which may reduce their bargaining power under threat of subsequent non-cooperation by the other party.

A sponsoring firm is likely to already have an existing financial structure, which discourages taking on significant debt. The SPV insulates the new project from the sponsor's balance sheet and helps to discourage 'underinvestment' due to previous debt history (Esty 2003). A large high-risk project can generate large distress costs. Isolation within a single-project company can protect the sponsor from a failed project (and incidentally the project from a failed company). By investing in a particular project, the sponsor does not have to 'bet the farm' on the success of an individual project.

More generally, in corporate finance, it can be said that a company with no debt is underperforming in terms of shareholder returns. Taking on new debt and investment is generally a good sign to the market that the company is being well-run with growth prospects unless it is judged that the new debt levels are unsustainable.

Modigliani and Miller (1958) proposed a theory that the allocation of corporate finance between shareholders and lenders should not affect the value of a firm. This was based on rather restrictive assumptions, which excluded the consideration of agency and bankruptcy costs as well as taxation. Stiglitz (1969, 1973) demonstrated that bankruptcy costs did affect the company value. Esty (2003) does likewise. Agency costs in project finance can be burdensome, which requires the design of solid governance mechanisms and the necessary coordination mechanisms for these to be effective, although governance for project finance does not necessarily translate into solid sound governance for project delivery and value for money in project outcomes.

4.3 Agency Costs and Project Governance

4.3.1 Governance of Large Projects to Minimise Agency Costs

Williamson (1979) explains the governance structure for large-scale projects involving the construction of specialist assets although he did not specifically have project finance in mind. In the detailed design and construction phase and in asset ownership, the SPV assumes the role of the client. At this point, the SPV has very high set-up 'sunk' costs, which are irrecoverable if a project is not carried through to completion. Specialist assets

have few if any alternative uses and would pose extreme problems of valuation in transfer to another client – the problem of 'asset specificity'. Traditional corrective market mechanisms for repeat transactions of non-specialist goods do not, therefore, work. Prior to the completion of asset creation, the net realisable value of the SPV is significantly less than either the historic cost to date or the SPV value as a going concern. Two mechanisms are possible to help ensure specific performance, namely third-party arbitration (monitoring) and/or inspection or integration under a unitary governance organisation. Accordingly, lenders insist on the right to 'step in' and manage the project if there is a risk that the asset construction may not be completed and 'step out' when they are satisfied that the project has reached a stable and satisfactory operating stage.

In a well-managed project, the maximum borrowing will be the point at which increasing operating surpluses can just meet loan interest/repayment instalment payments after which cumulative short- and long-term borrowing should decline.

Henisz et al. (2012) show that in large projects, the project coalition membership (clients, finance providers, suppliers, consultants, regulators, etc.) changes over time such that agency costs of prior errors may be locked in and borne at different project stages by other stakeholders through a process of 'displaced agency'. They suggest 'relational contracting' as a governance mechanism. This involves contracts governed by trust, transparency, fairness, and partnership (Colledge 2005). Unfortunately, this is not an approach generally found in UK construction despite repeated efforts by government and industry bodies (e.g. see Latham (1994), Egan (1998), and Wolstenholme (2009)). Additionally, Chang and Ive (2007a) note that asset specificity in construction can lead to a reversal of bargaining power, whereby clients may be forced to concede additional costs to a contractor even where this is not provided for in the contract.

4.3.2 The Whole Life Contract Mechanism as a Means of Minimising Agency Costs

A privately financed concession facility requires a whole life procurement method that delivers single-point responsibility from the sponsor's viewpoint and, thus, mitigates most of the principal–agent problems (Table 4.1). Conversely, it should be noted that whole life procurement does not necessarily require private finance.

Table 4.1 Agent failure linkage to components of project value.

Agent/SPV failure	Effect	NPV consequence
Poor design or build quality	Construction reworks	Increase in K_0
	Reduction in revenue – Greater likelihood of breakdowns	Decrease in V_t
	Greater operating costs	Increase in C_t
Poor procurement and/or cost control	Higher capital costs	Increase in K_0
Design or construction delays	Revenue delays	Decrease in V_1-C_1
	Higher construction cost	Increase in K_0
	Higher capitalised interest	Increase in K_0

(Continued)

Table 4.1 (Continued)

Agent/SPV failure	Effect	NPV consequence
Poor operation and maintenance	Greater likelihood of breakdowns	Decrease in V_t
	Greater operating costs	Increase in C_t
	Greater end-of-life costs	Increase in K_t
Poor marketing and management	Reduction in revenue	Decrease in V_t

Source: authors.

With reference to the project evaluation equation above, whole life procurement imposes a strict financial discipline on the SPV in that any serious errors in project or operations management may have significant negative consequences for NPV. With single-point responsibility, the buck literally stops with the SPV. As a governance mechanism, this is the very opposite of a relational contracting approach.

4.3.3 Long-Term vs. Short-Term Risk

As Sorge (2011) argued, the credit risk profile in project finance differs considerably from that in corporate finance, in that in project finance, the credit risk (as well as associated uncertainties) is highest in both the absolute and relative terms at the inception of a project, but tends to steadily diminish over the life of the project; when corporate finance is used to fund fixed capital investment, the firm's balance sheet is often initially strong enough to secure access to cheap credit, but may deteriorate over time either due to the financing demands of the project itself or due to factors external to it.

Therefore, there is a problem that project risks are generally much greater in the asset creation phase than in the operations phase. The 'bundling' of short- and long-term risks would appear to unnecessarily increase the cost of capital unless the project is refinanced at the start or soon after the commencement of the operations phase.

4.3.4 Project Finance as a Solution to Project Governance

The historical antecedents of modern project finance arose primarily to resolve otherwise intractable problems of project governance. Dating the origins of project finance turns to a degree on what is considered its salient feature. If the emphasis is on non-recourse lending, then Greek and Roman 'sea loans' are the obvious classical antecedents, as the market priced them according to the idiosyncratic risks associated with a specific voyage (Kavaleff 2002). Roman law also provided for 'limited liability' companies for a 'sole-purpose' with the benefit of protecting the personal property of shareholders from exposure to business risks (Kavaleff 2002). If the focus is instead on the use of project finance by state actors, whether republican or monarchical, the usual case cited is the English's crowns use of non-recourse loans from Italian merchants to finance silver mines in Devon and Cornwall (Esty et al. 2014; Kayser 2013; Müllner 2017).

In Renaissance and early modern Britain and the Dutch Republic, the English and Dutch East India companies financed sea voyages through non-recourse loans, which were repaid after the sale of cargo (Esty and Christov 2002). Over time, chartered companies and

joint-stock companies developed as competing corporate forms to provide more permanent capital, once it became clear that such arrangements offered vehicles for superior risk diversification, as the upfront costs were high and could not be recouped by individual investors if a given voyage failed (Smith 2018, 2021). The English crown over the seventeenth- and eighteenth-century licenced 'projectors' to raise non-recourse financing for a variety of projects of perceived public benefit, including fen and swamp drainage, fisheries, wreck salvage, and even overseas colonial ventures (Yamamoto 2018). Most financing of public works in the growing trading cities was done by municipal corporations who borrowed on their own balance sheets (Coffman et al. 2022).

From the mid-eighteenth century through to the early twentieth century, the widespread use of project financing was not a feature of western industrialising or industrialised economies, nor particularly of imperial ventures. Project finance as we recognise it today returned in the early-twentieth-century United States, where it provided an attractive vehicle with which to finance oilfield exploration and speculative real estate development (Esty et al. 2014). Until the 1980s, project finance was generally restricted to the oil and gas, mining, and real estate sectors.

Esty and Christov (2002) follow most authors in identifying the passage in 1978 of the Public Utility Regulatory Act in the United States as providing the impetus for the development of the so-called modern project finance. This legislation, designed to encourage the development of renewable and alternative energy, obliged local utility companies to negotiate long-term power-purchase agreements ('take-or-pay' contracts) with qualified power producers, which provided the economic logic for project sponsors to establish power companies (called Independent Power Producers) funded by non-recourse debt collateralised by the power-purchase agreements. Nevertheless, in North America, project finance outside the energy sector was relatively rare until the early twenty-first century, when extensions to the transport sector and social infrastructure received inspiration from the perceived success of the British model.

4.3.5 UK Public–Private Finance Initiative

The UK experience needs to be seen against a context of a public sector counter-revolution from the 1970s onwards following the slowdown in economic growth following the oil crisis in 1973. The combination of warfare and economic depression in the period 1914–1945 had led to greatly expanded state sectors. The key players in the economy became oligopolist large private sector corporations and the state both as employer and large-scale purchaser of goods and services.

This was accompanied by large-scale technical change, which led to a substantial growth in average wages. For capital-intensive industries, this was less of a problem, but for labour-intensive industries and government activities, this became a real problem, which led to public sector costs rising faster than the average rate of inflation and, if unchecked, requiring a greater share of the economy simply to deliver the same services. This led to the 'Fiscal Crisis of the State' (O'Connor 1973). At the same time, there was criticism of the relative efficiency of the public sector, the role of the state as regulator, and that many large organisations (both public and private) had become too big with the cross-subsidisation of inefficient activities.

Parallel with these developments was the rise of monetarist theory and policy in opposition to the prevailing Keynesian orthodoxy. This, in particular, stressed control of the

money supply and reining in of public expenditure and borrowing. A more overtly political development was the desire by the Conservative government of 1979–1997 to curb the power of public sector trade unions who many saw as having become too powerful. A final objective was to remove risk from public sector activities subject to overspending and delay.

This led to three major strands of changed policy:

1) Deregulation – in the UK, the regulation of individual industries was reduced, and state bodies were required to purchase using competitive tendering.
2) Privatisation – sections of the public sector and particularly state-owned enterprise were transferred to the private sector on the grounds that they would be better managed as private sector enterprises.
3) Marketisation – large government organisations should be broken up and operated with decentralised business units operating in a quasi-market – the UK NHS being a prime example.

Because of constraints on public sector borrowing, the government also looked for ways in which capital projects could be privately financed. What emerged was the Private Finance Initiative (PFI) and later the Public–Private Partnership (PPP). Essentially, this meant that a private sector vehicle (the SPV) owned the new capital asset and operated it either with or without the accompanying business. On the one hand, this might mean the totally private operation of transport services; on the other hand, the new facility would support and be operated in conjunction with a state organisation such as the UK NHS or the Prison Service. So, the state paid for the services of a constructed facility without actually owning it until the end of the PFI or PPP contract (Ive 2004).

4.4 Methodology

In the following, we present a case study of a UK PFI hospital. The case study illustrates the effects of choices of project finance on project organising. The case is chosen for two reasons: First, it is an example that has its roots in early development of PFI and is connected to the modern day as the UK NHS seeks to implement a new programme of hospital construction (Mohan 2002); second, the case is an example of not just the influence of project financing, but the wider interconnectedness between project organising and government policy.

Our analysis of the case is interpretive, and the objective twofold. First, our focus was on developing a teaching case around the theory we have positioned in the earlier sections of this chapter. Our analysis, therefore, as well as writing up the case, involved an iterative process between the authors over face-to-face meetings and virtual communication to identify themes for how the case can be used across a range of Built Environment postgraduate programmes. Second, in doing so, we looked to weave together these themes with the concepts presented in the theories above so as to provide a conceptual direction for future theorising. We do not see these two objectives as mutually exclusive, and indeed, in the process of writing, we further developed and clarified our understanding of both objectives.

In presenting the case, first, we offer some background context, including the approval of the investment plan within a wider context of a nationwide hospital building programme;

second, we present the business case for the new hospital and the SPV before moving on to present the organisational and governance arrangements; and third, we finish with a discussion on the performance of the new hospital in operation, drawing out three key lessons from this case for construction project organising.

4.5 Case Study: Peterborough City Hospital (National Audit Office 2012, 2013)

4.5.1 Background

Reforms to the UK NHS arose from the impact of 'New Public Management' (1990s–2010s), which aimed to change public services so as to have a greater focus on the customer and operate more like private sector businesses. In the case of the NHS, this required the creation of local business units in the form of NHS Trusts, which are supposed to be financially self-sufficient. Additionally, a quasi-market was introduced in 1994 into the capital projects procurement process such that Trusts were rewarded by actual performance rather than service capacity (Ruane 2016).

Our case is a new hospital project in the Peterborough and Stamford Hospitals NHS Foundation Trust, which was authorised as a Trust in 2004. The Trust was funded by Public Share Capital from the Department of Health on which it was expected to pay a dividend of 3.5%. It had very considerable financial and managerial autonomy but was answerable for financial management to Monitor in this quasi-marketplace. The government established Monitor in 2003 as a new regulatory body to:

- set prices for NHS-funded care in partnership with NHS England,
- enable integrated care,
- safeguard patient choice and prevent anti-competitive behaviour, which is against the interests of patients,
- support commissioners to protect essential health care services for patients if a provider gets into financial difficulties.

Following financial difficulties (caused in part by the new hospital PFI scheme), it was merged with another NHS Trust in 2017 to become the North West Anglia NHS Trust (Hawkes 2014).

In support of its policy for establishing NHS Trusts, in 2002, the UK government established the East of England Strategic Health Authorities (SHAs) as part of a nationwide set of such bodies to:

- develop a coherent strategic framework for services development across all NHS bodies;
- monitor performance of local NHS Trusts and Primary Care Trusts;
- ensure involvement of patients in decision-making for services development.

In 2013, SHAs were abolished and their functions devolved to NHS Property Services and Public Health England.

In 2014, the Public Accounts Committee of the House of Commons issued a report criticising Monitor for failing to carry out its work properly and for failing to recruit enough

staff with appropriate expertise. In 2016 it was absorbed into a new body – NHS Improvement.

4.5.2 The New Hospital

The government announced in 2000 that it would provide investment for 100 new hospitals during the following decade, governed through the arrangement briefly described. It was decided that the only way this could be achieved would be through the PFI, in which the hospital is financed, designed, constructed, and maintained for 25–30 years by a private sector entity (SPV) after which it is transferred to the Trust. Under some schemes, the SPV might also supply 'soft' services such as cleaning and catering. In 2001, the Department of Health approved the Strategic Greater Peterborough Health Investment Plan. At the time, in-patient services were delivered from three sites. This was inefficient, and the facilities themselves were outdated. It was recognised that a new modern facility could better deliver the services currently delivered from the three existing sites. It was also recognised that other services could also be delivered from the new site.

The private sector SPV responsible for designing, constructing, and operating the hospital for 35 years is Peterborough (Progress Health) plc financed by:

(a) £50 000 in ordinary shares;
(b) £396 115 000 guaranteed bonds at 5.581% per annum;
(c) £26 273 000 loan notes at 13.5% per annum.

A majority of shares were held by the Brookfield Group (construction). The Brookfield Group was responsible for the actual design and construction. The income is provided through a monthly 'Unitary payment' by the Trust for all services.

The business case for the new hospital took into account that the Trust already had a maintenance backlog of over £200m and that there was great staff dissatisfaction with existing facilities. However, the fundamental flaw in the scheme business case was the assumption that revenue increases from service outputs and savings in operational costs would offset the annual cost of the PFI scheme. Monitor expressed concerns about the affordability of the original hospital scheme. The UK HM Treasury approved the scheme, provided that Monitor's concerns were adequately addressed. In the end, the key body Monitor was effectively overruled by the Department of Health (Gainsbury 2012; Kmietowicz 2012), which in 2007 approved the PFI scheme without the Trust addressing Monitor's concerns. Subsequent value engineering in the design stage of the project resulted in the new hospital's capacity being reduced by 98 beds. The revised scheme went ahead and the hospital was handed over in 2010.

4.5.3 Organisational and Governance Arrangements

Figure 4.1 sets out in graphical form the organisational arrangements that we have described above. What can be seen from Figure 4.1 is that there appears to have been effectively four different governance bodies (two of which no longer exist) that all in some way influenced the financing and cash flow of the project both in its design and build and in operation.

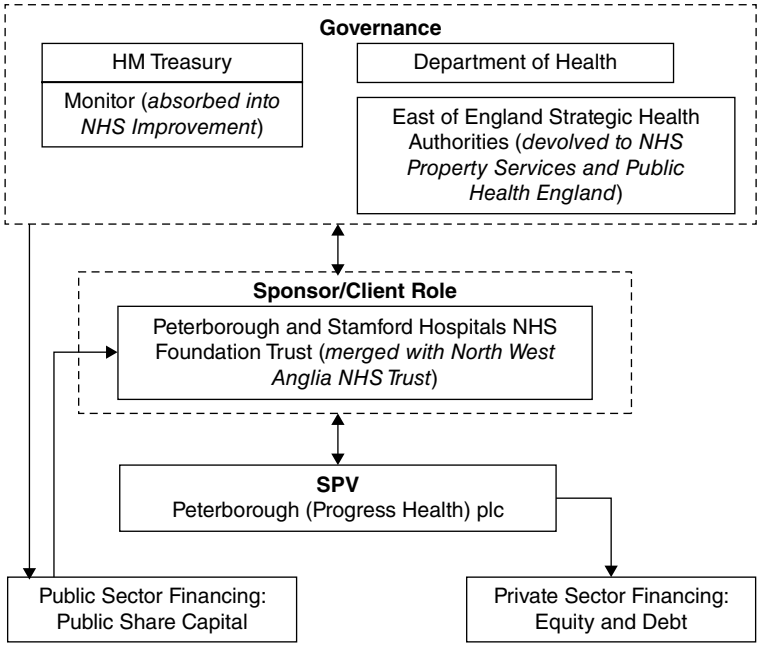

Figure 4.1 Peterborough City Hospital inter-organisational relations. Source: authors.

4.5.4 Operational Performance

The opening of the hospital attracted a considerable number of patients from outside the area. However, the time, cost, and management effort associated with incorporating the new facility into existing arrangements and treating new patients was significantly underestimated and not matched by corresponding income. Therefore, the projected revenue increases and operational cost savings failed to materialise. The Trust soon found itself in serious financial trouble. NHS Peterborough (not to be confused with the Trust), as the main commissioner for the Trust's service outputs, also determines payments to the Trust. It, thus, has a great deal of control over its income.

At the time that the Trust was experiencing financial difficulties with the new hospital, NHS Peterborough was struggling to stay within its Department of Health funding allocation. As a result, it adopted a much stricter regime in performance review and management of contracted services. Accordingly, it reduced payments to the Trust for underachieving against national and locally developed performance indicators. While this was by no means the sole reason for the Trust's difficulties, it made a bad situation worse.

Given the realisation that the Trust was not financially sustainable, the accountants, PwC, were asked to advise on future options. They concluded that the cost of the estate was the major part of the problem, but this included the underutilisation of the estate, which reflects the original downsizing of the scheme. This does ultimately suggest a briefing failure. Additionally, the team concluded that there was no affordable way of refinancing the project suggests that the cost of capital to the Trust is unnecessarily high.

Although the commissioner had expressed support for the Greater Peterborough Health Investment Plan (of which the Peterborough City Hospital is a major part) in 2001, it is unaccountable for that decision nor committed to fund the increased outputs from that investment. It subsequently had to be bailed out by the Department of Health in the form of Public Dividend Capital (Public Sector Equity) in order to meet the financial shortfall resulting from the scheme and was eventually amalgamated with a neighbouring NHS Trust (Limb 2013).

4.5.5 Client–SPV Relations

In 2016, Cambridgeshire Fire and Rescue service issued an enforcement notice because of faults in fire compartmentation in the building discovered in 2014. These were completed in 2018 at the SPV's expense. However, a dispute then arose as to whether the availability part of the unitary payment should also be reduced. Both the parties entered into a 'standstill arrangement' until the issue was settled. This meant that the Trust would not make any further deductions during this period and the SPV would continue to perform its contracted services. Eventually, the case went to adjudication, and deductions from availability payments were not permitted for periods prior to the enforcement order.

In 2015, the Trust requested termination of Estate services by the SPV. The right to do this was disputed, and negotiations were entered into for the SPV to continue providing services. Additionally, in 2016–2017, the Trust made £1.7m in deductions from availability payments. In 2018, the termination request seems to have been withdrawn as a result of settlements on a number of issues. However, with the exception of 2011–2012, deductions from the Unitary payment have been made in every year of operation (Peterborough (Progress Health) plc annual accounts 2010–2021). This suggests that client–SPV relations have been less than smooth during the first decade of operations.

In the following section, we discuss this case against the backdrop of the theory we presented in the first part of this chapter.

4.6 Discussion, Lessons, and Theoretical Challenges

The evidence we have presented in our case study above shows that project financing influences project organising by both enabling and constraining the performance of the project during its development, construction, and in operation. While there is much to learn from an in-depth analysis of this case, for the purposes of this chapter, we discuss three key influencing factors, namely (i) client capability; (ii) risk-bearing capacity; and (iii) governance.

First, the evidence shows that the type of organisation that may be suitable or unsuitable for running a local set of health services is not necessarily an appropriate organisation for the active client role in running a large construction project with project finance. Every large asset construction (capital) project for a client essentially requires the client to undertake a business change project to receive and operate the new facility. One of the key failings in this case was that the Trust very significantly underestimated the staff time and thus costs (for existing and new staff) required to receive and operate the new hospital.

However, the client here faced another set of problems because of scale. The hospital project operating and finance costs (involving a 35-year commitment with costs index-linked to the Retail Price Index) were large in relation to the Trusts annual budget, £41.6m compared with annual turnover of £208m for 2011–2012 (NAO 2012). This left very little financial flexibility for the Trust in terms of future development. It also meant that a small and inexperienced client was facing the combination of a large multinational bank (ABN-AMRO) and contractor (Brookfield) who were the main equity holders and lenders in the SPV. The asymmetry of size itself gave rise to greater bargaining power for the SPV and made principal–agent problems and bargaining power reversal (Chang and Ive 2007b) all the more likely. This manifested itself, for example, in the post-construction disputes regarding fire compartmentation and operating service quality. Although there exist bodies such as NHS Improvement, there appears to be no organisation with the capacity and mission to act either directly or in an advisory capacity supporting the necessary active client role in capital projects with or on behalf of relatively small NHS Trusts ill-equipped for such a role. Such an organisation is recommended for the health sector by Naylor (2017) and more generally by Winch and Leiringer (2016). Procurement through the PFI/PPP route does not transfer all risk from the public sector, and therefore, the client role is essential.

Second, the risk-bearing capacity of the firm (Chang 2015) can be applied to an NHS Trust, and here, the unitary charges to be paid for the hospital dominated the subsequent operational budget of the Trust such that it had no room for financial manoeuvre if other financial performance measures were unsatisfactory. The high unitary charges reflect finance where the short- and long-term risks are 'bundled' – this makes no sense in the operational phase when the short-term risks are no longer present. Since one would expect the SPV to renegotiate loans during the operational phase, it makes no sense for the NHS Trust to continue to pay higher interest charges whether or not the PFI contract is itself terminated (Hellowell 2015).

In 2012, Brookfield Asset Management (group parent company) had turnover of US$18.7bn, non-recourse borrowings of US$41.2bn, other corporate borrowings of US$3.5bn, and equity of US$44.3bn (Brookfield Asset Management 2012). For 2012, ABN-AMRO had an operating income of EUR 7.3bn, assets of EUR 394.4bn, and equity of EUR 15.8bn (ABN-AMRO 2012). The marginal risk posed by the Peterborough City Hospital Project was, therefore, very small in relation to the overall size of these companies. However, the Peterborough and Stamford Hospitals Foundation NHS Trust failed to correctly forecast the increase in excess cost of the estates function (both PFI and non-PFI). This was estimated at £11–£26m, which represented 27–63% of the 2011–2012 Trust deficit of £45m. In the context of this project, what might appear as a small forecasting error for the private sector can be significant for the public client when related to operating rather than capital costs. This also poses a challenge in terms of the relationship between the size of the project and that of the client.

Finally, there was a clear failure of project governance by the Department of Health and the SHA in: (i) not stopping the project when it was only marginally viable with the best assumptions; (ii) not setting out alternative options for the health service delivery problems which the hospital was meant to solve; and (iii) not taking a geographically wider view of the problem (as was indeed eventually done). In the context of a completely artificial government-regulated market, those who have the power to regulate charges (the commissioner, in this case) should

be part of the project evaluation team and not be excluded from the project team entirely. Due diligence by the lenders would require them to assure themselves on this point.

Project governance should also ensure that there is a system of a detailed post-project evaluation of costs and benefits. A review of costs is inhibited by the insistence of commercial confidentiality by SPV companies. A review of benefit to cost performance only seems to be carried out when things go wrong, such as in this case. This means that there appears to be little systematic inter-project learning. An early report (House of Commons 2003) was very positive about PFI delivering value for money but warned that it was too early for a full assessment to be made. National Audit Office (2020) states that four out of nine surveyed authorities were dissatisfied with the condition of assets at handover at the end of the PFI contract. This suggests a more general problem, namely that those who took decisions at the front end of PFI projects are unlikely to be held accountable for the asset condition 25–35 years later. It should not come as a surprise that the UK government has abandoned PFI/PPP for new forms infrastructure financing and procurement (HM Treasury 2018).

4.7 Conclusions

Organising project finance is not just about finding the right SPV. Capable organisations responsible for active sponsor, client, and governance roles need to be in place prior to any finance deal. In the case set out in this chapter, there were clearly serious flaws in the business case, the briefing process (both local and regional), full stakeholder engagement, and project evaluation. The form of project finance certainly oriented the manner in which these processes were organised; while this may have transferred some risk away from the client, it did not relieve them (or other health-based stakeholders) of collective responsibility for proper organisation of the project front end, nor did it relieve the Department of Health on behalf of the taxpayer from learning lessons from failure.

Further research would be useful in (i) understanding alternative possibilities for private, non-recourse finance following the demise of PFI; and (ii) designing more coherent forms of cooperative multi-stakeholder organisation in both the project front end and in post-construction transfer to efficient and effective operation of the transferred asset and the associated services in which they are delivered.

The need for new public infrastructure in the twenty-first century is growing at a time when public finances are constrained. For those who commission and govern such projects, their financing and subsequent delivery and operation cannot be taken in isolation. This points towards an urgent need for new forms of project organising at the interface between the client and the SPV.

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