

Listed infrastructure funds: funding and financial management

With the recent poor performance of many ASX-listed infrastructure funds, the financial management practices of these funds have faced considerable criticism. However, some of these practices can be consistent with principles of good financial management. Since the listed infrastructure fund model is an innovation with many good characteristics, it is important that the failings exposed by the current crisis are correctly identified to enable improvements to this model through better regulation, governance and market discipline.



KEVIN DAVIS SF Fin is Commonwealth Bank Chair of Finance, University of Melbourne and Director, Melbourne Centre for Financial Studies. Email: kevin.davis@melbournecentre.com.au

THE CURRENT FINANCIAL CRISIS has seen substantial declines in the market value of many infrastructure funds listed on the ASX,¹ brought attention to criticisms of the business and governance models used, and led to decisions by many infrastructure fund operators to make substantial changes in their financial management strategies.² Concerns have been raised about a number of interrelated common past practices, upon which this article focuses.³

One is regular (upward) accounting revaluations of the underlying infrastructure assets for which there is no readily reliable market valuation. A second is the practice of using those higher asset valuations to justify taking on increased external debt and possibly increasing leverage. A third is the practice of paying distributions to investors which exceed accounting earnings or even the operating cash flows of the fund – and, in the latter case, funding those distributions with the proceeds of the debt issues. A number of infrastructure fund operators have announced recently that they will cease the practice of making distributions to investors in excess of earnings, with some suspending distributions in response to the problems posed for them by the financial crisis.

This paper argues that the practices described above are not necessarily inconsistent with good financial management of such vehicles for financing and management of infrastructure assets. While there are strong grounds for believing that the governance models and actual management practices have been inadequate⁴ there is, in principle, nothing wrong with the practices of asset revaluations, distributions exceeding earnings (or operating cash flows), and external borrowings based on the higher asset valuations. And, in the environment created by the sub-prime mortgage crisis, there are good reasons for temporarily ceasing those practices, without implying that they are inherently faulty.

Section 1 of this paper briefly outlines how infrastructure funds operate,⁵ including a discussion of the popular practice of the use of stapled security structures, and provides information on their recent importance in Australia. Section 2 uses a simple example of an infrastructure asset to demonstrate that the practices outlined above can be consistent with good financial management. Section 3 provides concluding comments in the context of problems identified with the infrastructure fund model in the current financial crisis.

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The infrastructure fund model

The infrastructure fund model appears to be an Australian financial innovation popularised initially by Macquarie Bank and subsequently adopted by a number of other investment banks and finance houses such as Babcock and Brown. As at April 2008, there were 23 infrastructure funds listed on the ASX with total market capitalisation of \$42 billion, of which 18 had a structure involving *stapled securities*. They are the owner/operators of such assets as pipeline operators, power generators, toll roads, airports etc.

The infrastructure fund involves its promoter acquiring or constructing infrastructure assets, which are sold into a trust that raises funds by issue of units to investors. The promoter manages the trust (for a fee), and the trust is generally structured such that it is classified as a non-operating trust. As a result, it is a 'pass-through' vehicle for tax purposes – as long as profits are fully distributed to unit holders, no corporate tax is levied.

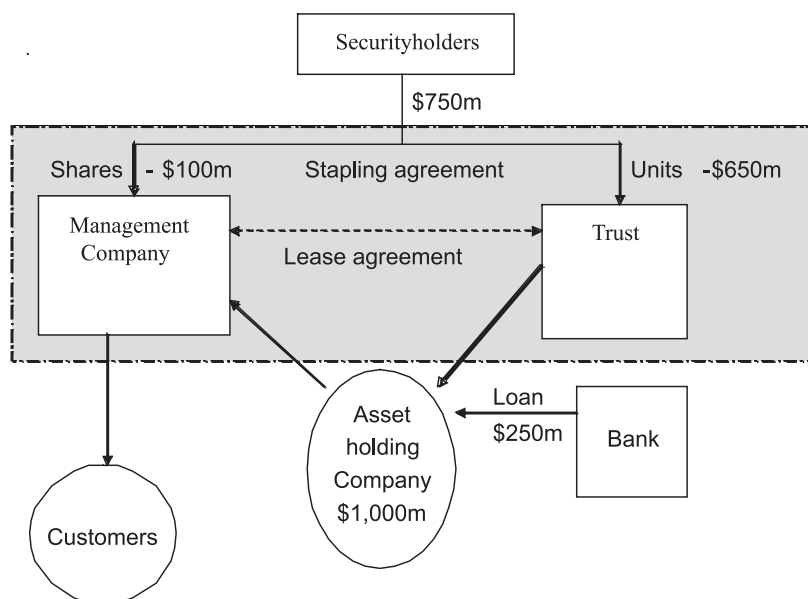
To achieve the non-operating trust structure, and for other reasons, a stapled security structure, which appears

virtually unique to Australia, has become popular. In these cases, in addition to the trust, the fund involves a management company, which is a joint stock company. Investors in the fund receive both a unit in the trust and a share in the management company, and those two securities (the unit and the share) are 'stapled' together. Stapling means that the securities cannot be separately traded. In some cases, the stapling may also include a debt instrument issued by the trust. Generally, the bulk of the funds subscribed are allocated to the purchase of the unit in (and debt instrument issued by) the trust. Distributions to investors comprise both dividends paid by the company and distributions paid by the trust.

There is a wide range of structures which can be (and are) adopted. One involves the trust being the owner of the assets and leasing them to the management company. Of total revenues received by the management company from customers, most are paid as a tax deductible expense in the form of lease payments to the trust. The residual profits of the management company are subject to company tax and can be paid out to investors as franked dividends. The lease payments it receives can be paid out by the trust as distributions to investors without incurring company tax. (Some part of the lease payment reflects a return of capital (depreciation) and the remainder is income).

An alternative structure would be for the management company to be the owner of the assets, financing these by borrowings from the trust. A similar outcome occurs, with much of the revenue received by the management company being paid to the trust as interest and repayment of principal, for subsequent distribution to investors. In many of these structures, the management company may be little more than a shell used to hire asset management services from an external company – typically a subsidiary of the fund promoter.

FIGURE 1: Simplified infrastructure fund structure



In both structures, the infrastructure assets owned may be held within separate company structures, with the trust or management company having 100% ownership or less (perhaps with the promoter retaining some equity stake). Those asset-holding companies can themselves be levered, borrowing from third parties to supplement the funds provided as equity from the infrastructure fund.

Figure 1 provides a highly simplified example, in which a \$1 billion infrastructure asset is initially financed by \$250 million external borrowings by the asset-holding company and by \$750 million provided by the infrastructure fund.⁶ In this example, the trust is the owner of the asset-holding company and leases the assets to the management company. The \$750 million provided by investors in the fund is allocated as \$650 million for units in the trust and \$100 million as shares in the management company. In this example, that \$100 million, not being needed upfront by the management company may be lent to the trust to assist in the purchase of the asset.

After its establishment, the fund may generate net revenues from customers of, say \$100 million p.a. after management expenses. The management company might retain \$10 million as profit (on which tax of \$3 million would be paid), and pay the remaining \$90 million as lease expenses to the asset-holding company/trust, out of which \$25 million would be repayment of principal and interest to the bank. The trust has a cash inflow of \$65 million, of which \$30 million might represent depreciation on the assets and the remaining \$35 million constitutes income. The fund can distribute to investors the following amounts as payments on the stapled securities: \$7 million franked dividend (distribution of profits of the management company); \$35 million trust income (taxable at the investor level); and \$30 million as a return of capital (generally referred to inappropriately, since it is not really income, as tax-deferred income).

Generally, the infrastructure funds have been structured by their promoters in such a way as to minimise the ability of investors to exert any effective governance or control. While unit-holders have voting rights in the trust, their ability to replace the management company which is the responsible entity for the trust is constrained by 'poison pills' (whereby such a change involves significant financial costs to the fund) and by the existence of special voting shares or 'super majority' requirements on votes to change the responsible entity.

In this way, the infrastructure funds have some characteristics of the 'private equity' model. The management company appoints directors to the individual asset operating companies, which are not individually subject directly to stock market discipline and threat of takeover. While the stock market price of units in the fund can fluctuate, the governance arrangements limit external influence. However, as some infrastructure fund operators have discovered in the current crisis, high leverage at a time of declining market capitalisation has led to lenders exerting significant influence on the funds and management companies.

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Financial management and infrastructure funds

Infrastructure assets differ substantially in their operating, risk and cash flow characteristics, and are often subject to regulatory oversight under access pricing regulation. Infrastructure funds are structured in a myriad of ways involving collections of infrastructure assets, and tax issues are an important determinant of the specific structures adopted. It is, however, possible to identify some key features of financial management by use of a simple example which ignores some of these complications.

Consider the case of a simple infrastructure asset, with the characteristics depicted in Table 1. The asset has a 10-year life, costs \$100 to construct and, initially, has increasing cash flows over time. At the assumed discount rate of 10% p.a., the asset has a net present value (NPV) prior to construction of \$78. Once constructed, and after the first year in which no cash flows are projected, its present value and, we assume, market value will be \$186, reflecting the \$100 expenditure and the closer proximity of future cash flows. Accounting depreciation on the asset (assuming straight line depreciation) is \$10 p.a. and earnings are equal to cash flow less depreciation. In this simplified example, there is no external leverage (and hence no interest and principal repayments to third parties) and no taxation. We do, however, assume that the initial investment by the owners is legally structured as a stapled security consisting of part equity and part debt (for tax reasons). Despite its appearance (and tax treatment) as debt plus equity, stapling means that the whole of the investment has the risk and return characteristics of equity.

What are the key characteristics of this asset which are relevant for financial management? First, note that projected cash flow exceeds earnings in the initial years. Second, note that the expected market value of the asset initially increases over time (until year four in this example) before declining to zero at the end of its life. Third, if there is some optimal leverage ratio, relative to market value, the increase in the asset's market value, and thus the value of equity, in the initial years requires some replacement of equity with debt. Note that these characteristics relate to

TABLE 1: Simplified infrastructure asset – cash flows, earnings and value

Year	0	1	2	3	4	5	6	7	8	9	10
Cash Flow	-100	-	10	20	30	40	50	50	50	50	50
Depreciation		10	10	10	10	10	10	10	10	10	10
Earnings		-10	-	10	20	30	40	40	40	40	40
Market Value	78	186	205	215	217	209	190	158	124	87	45

expected cash flows at the commencement of the project to construct the asset. We assume that expectations are realised and thus are not considering situations in which the project turns out better or worse than expected.

What are the consequences of these characteristics for financial management of the infrastructure asset/fund?

First, there is nothing inappropriate about the fund making distributions to investors which exceed earnings. For a number of years, the fund has cash flow available to do so, and that excess (equal to accounting depreciation in this simple example) represents return of capital to the investors. Of course, paying out all net operating cash flows to investors means that the fund will need to raise new equity or debt when replacement of the assets is required. But unless investment for replacement of the asset is required at the time that operating cash flows are received, non-distribution would involve the fund building up and investing internal cash balances. Hence, the preferred strategy depends upon the timing of, and optimal strategy for financing, replacement investment or expansion. The view that distributions of free cash flow prevent value destroying investments by over-confident, entrenched, managers⁷ gives further credibility to this strategy.

Second, there is nothing inherently inappropriate about the fund increasing the internally assessed market value of its assets. As Table 1 illustrates, the present (and in principle, market) value of the assets does increase in the initial years of the asset life, as future cash flows become closer in time. If asset revaluations are taken to profit and loss (implicitly meaning that some form of economic depreciation is being adopted), earnings would be substantially increased (and exceed cash flows) in the early years of the project, and substantially decreased in the latter years. In the early years of the asset life, distributions to investors which are based on earnings figures incorporating the effect of asset revaluation would exceed operating cash flows, thus requiring replacement funds to be raised somehow.

This leads to the third financial management characteristic of the infrastructure fund: undertaking external borrowings, underpinned by increased asset values, to finance distributions to investors in excess of operating cash flows. Again, in principle (and provided the asset valuations are realistic), there is nothing inherently wrong with this practice. It involves an adjustment of the capital structure of the infrastructure activities⁸ away from, in this simple example, 100% financing by fund investors towards some reliance on debt issued to third parties.

If optimal capital management involves some target debt/asset ratio (based on the market value of assets), the increase in asset valuation by itself provides justification for the issue of debt and reduction in equity finance. However, the peculiar nature of stapled securities means that the capital restructuring cannot be interpreted simply as an increase in the debt/equity ratio. Where, for example, stapled securities involve both a unit (equity share) in the trust stapled to a debt instrument (sometimes referred to as a loan note), distributions to investors can involve a component which is a repayment of the loan principle. In this case, the new external debt may simply be replacing the debt financing originally provided by investors in the fund.

For example, the fund's assets may have initially been \$1 billion financed entirely by stapled securities issued to investors. With revaluation of the assets to, say, \$1.25 billion, the fund may raise \$250 million of external debt and repay \$250 million to investors in the form of repayment of principal of the loan note component of the stapled security. While for tax purposes this leaves the amount of debt financing unchanged, the fund's 'external leverage' has been increased, such that investors in the fund now face a higher volatility of the value of their investment.⁹ (In this illustration, the external leverage (external debt/market value of assets) has gone from zero to 20%).

This strategy, which increases the leverage of investor's positions in the fund, can be rationalised in several ways. First, it is the leverage of their overall portfolio rather than of individual positions which should be of primary concern to investors. Because the strategy involves the return of part of their capital to investors, they are able to reinvest those funds in, for example, risk-free debt and thus largely undo the effects on the overall leverage of their portfolio. Second, infrastructure assets have a long duration, and the preferred position of investors in the fund may be for a shorter duration investment, which the strategy of replacing investor funds with external debt achieves. Third, stapled securities with high distribution rates based on return of capital may appeal to investors seeking high investment returns to fund consumption, but are psychologically averse to running down their capital. The behavioural finance literature¹⁰ provides similar examples suggesting that investors may regard distributions as 'income' rather than returns of capital. The marketing strategy of forecasting high distributions for stapled securities (based on asset revaluations and external borrowings), allied with describing returns of capital as 'tax deferred income', caters to that behavioural characteristic.¹¹

Conclusion

While in principle, the financial management practices outlined in the previous section are acceptable, they are open to abuse. Asset revaluations may be optimistic. External leverage may be increased beyond prudent levels and used to pay distributions of income (in addition to returns of capital) at levels which are not justified by returns on the infrastructure assets. Replacing investors' funds with external, short-term debt may enhance external monitoring (by the banks involved) but creates funding risks when those debts need to be rolled over.

Other potential problems can also be identified. The infrastructure assets purchased by the management company for the fund may have been overpriced and incapable of delivering the returns expected. Fees charged by the fund sponsor may have been too high for the services rendered, creating an additional drain on the net assets of the fund. Complex and opaque financial interrelationships between the fund and its sponsor and related parties, involving such transactions as loans, joint ownership of assets, equity investments, guarantees and options granted, make the true financial position of the fund hard to determine.

In the environment of increasing asset prices prior to the onset of the financial crisis which began in 2007, these problems were largely disguised or ignored. However, high leverage and declining asset values have created significant problems for infrastructure funds and their promoters as credit became extremely costly – if available at all. In this environment, and with declining profitability due to the economic slowdown, distribution rates to investors have been cut, with several promoters publicly eschewing the past practice of paying distributions in excess of earnings.

Some of the commonly criticised financial management practices are not inherently faulty (although open to abuse), and it would be unfortunate if a potentially valuable structure for the financing of infrastructure investments was discarded rather than reformed.

Declining asset values, increased debt financing costs, reduced distributions, and ongoing media criticism about poor governance arrangements and practices in the infrastructure fund model, have combined to severely depress their stock prices, and raise questions about the future of this innovative form of financing.¹² While, as outlined above, the model is not inherently flawed, fund promoters had been able to exploit inadequate market discipline, limited regulation, and easy credit market conditions, to construct unsuitable fund structures and extract high fee incomes.

Given the importance of this asset category, both to the functioning of the economy and as an investment class for superannuation funds and other investors, it is important that the faults of the infrastructure fund model be correctly identified and resolved. As argued here, some of the commonly criticised financial management practices are not inherently faulty (although open to abuse), and it would be unfortunate if a potentially valuable structure for the financing of infrastructure investments was discarded rather than reformed. ☺

Notes

- 1 In the year to November 2008, the market capitalisation of the 22 listed infrastructure funds fell by 47.9%, after having risen by 17.8% in the previous 12 months. www.asx.com.au/products/pdf/lmi/lmi_monthly_update_200811.pdf
- 2 Much of the subsequent discussion also applies to listed property (real estate) funds which have similar characteristics.
- 3 See, for example, the comments in May 2007 by Jim Chanos likening the Macquarie infrastructure funds model to a Ponzi scheme, reported in Bethany McLean 2007, 'Would you buy a bridge from this man?', *Fortune*, October 2. www.money.cnn.com/2007/09/17/news/international/macquarie_infrastructure_funds.fortune/index.htm
- 4 RiskMetrics Group 2008, Infrastructure funds: managing, financing and accounting, in whose interests? www.riskmetrics.com/docs/2008infrastructure/
- 5 An overview of the global development of different types of infrastructure funds (including private equity and direct pension fund investments) can be found in R. Orr 2007, 'The rise of infra funds', *Project Finance International*, Supplement, Global Infrastructure Report, 13 June. www.crgp.stanford.edu/publications/articles_presentations/Orr_01_Infra_funds_2007pfile.pdf
- 6 Fees associated with the floating of the fund are ignored.
- 7 Michael C. Jensen, 1986, 'Agency costs of free cash flow, corporate finance and takeovers', *American Economic Review*, vol. 76, no. 2, pp. 323–329.
- 8 This wording is used because in practice, as described earlier, the infrastructure assets may be held in separate operating companies owned and financed by the fund, and the borrowings may be undertaken by either the operating company or by the fund itself.
- 9 Their investment, while notionally comprising debt plus equity (units), is from a risk and valuation perspective, essentially equity because of the effect of stapling and subordination of their debt claim to that of external debt providers.
- 10 See, for example, H. Shefrin and M. Statman 1993, 'Behavioural aspects of the design of financial products', *Financial Management*, vol. 11, no. 2, Summer, pp. 123–134.
- 11 'Tax deferred income' is not included in current assessable income for tax purposes, but is a deduction from the investment's cost base used in calculating capital gains when the investment is sold.
- 12 See, for example, the article 'Taking its toll' 2008, *The Economist*, 28 August. www.economist.com/displaystory.cfm?story_id=12010749