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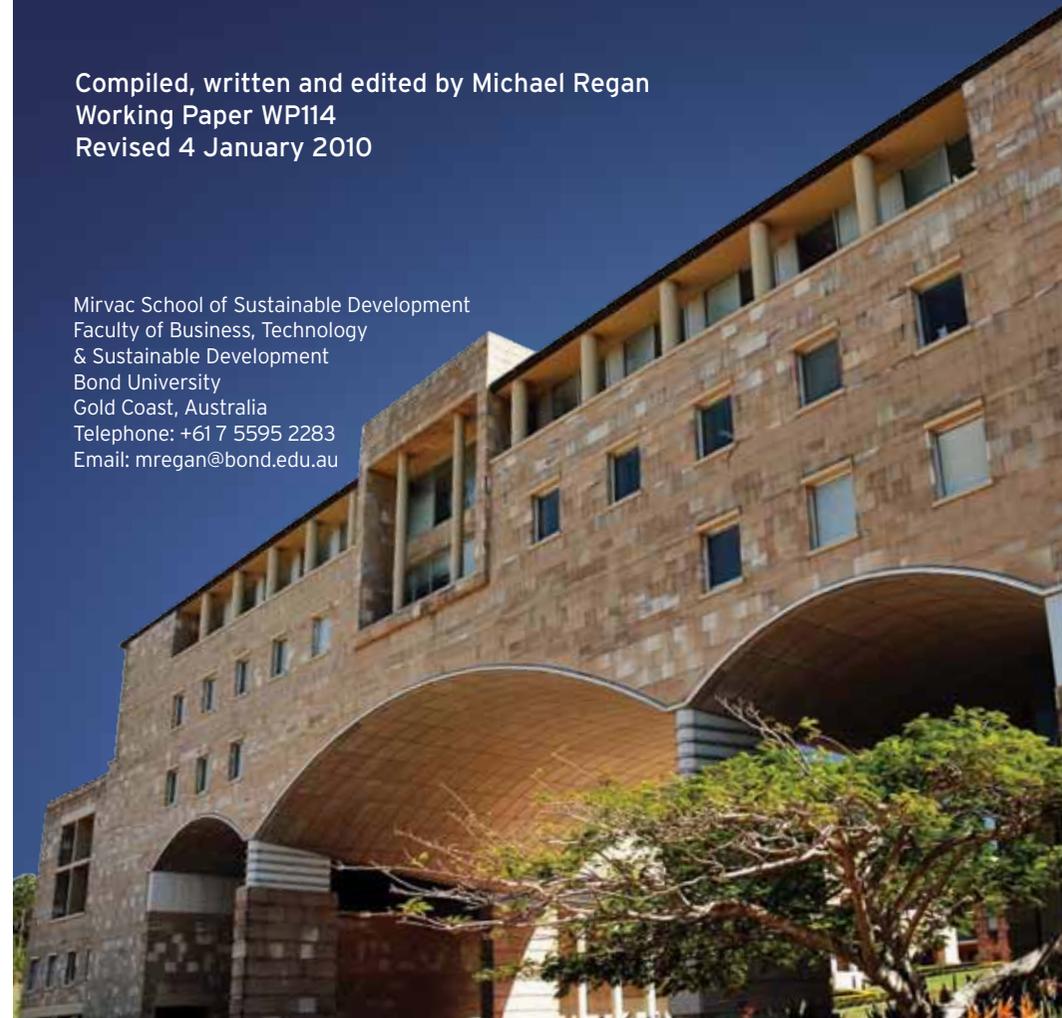


GLOSSARY OF TERMS

PROJECT FINANCE, SUSTAINABLE DEVELOPMENT AND PROJECT PROCUREMENT

Compiled, written and edited by Michael Regan
Working Paper WP114
Revised 4 January 2010

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Introduction

This is a dictionary of terms commonly found in the disciplines of procurement, project finance, infrastructure management and sustainable development and is the accumulation of many hastily scribbled notes and references gathered over a long period of time. Many were used in the three editions of the Australian Business Dictionary in the 1990s and it seemed timely to put these commonly used terms in these fields into a single source document.

There are many good dictionaries on the market including specialist publications dealing with the disciplines canvassed here. This is not an attempt to replicate them in a small way. Instead, it was designed to fill the void that occurs in multi-disciplinary fields such as infrastructure where financial, legal, project management and public policy considerations may arise in a single proposition. The terms used in infrastructure do not always require specific technical meanings. Rather, those that work in this space need a sense of context and a better understanding of how the various pieces of the project jig-saw puzzle can be viewed, measured and rearranged.

This dictionary is also a step toward breaking down the differences in meaning given to terminology by the different professions and disciplines that inhabit the infrastructure landscape. Jargon is a barrier to understanding and it is an exclusionary tool, because it enables technical people and professionals to keep clients and adversaries at arm's length. It is also used in meetings and negotiations to advantage insiders at the expense of those too afraid to ask for an explanation. As tempting as it was to do, this paper doesn't include much of the slang that is also used by professionals in this field.

A ready reference source for these terms helps break down differences in understandings and levels the playing field in discussions. It also equips non-professionals with a broader understanding of what is going on in meetings, helps to pick-up what advisors are actually saying and it can avoid having to constantly ask the speaker what they are talking about although it is important to ask professionals what technical terms mean and they should explain. Especially if you or your firm is paying the bill! But, in reality, if we ask too many questions during a lecture, meeting or negotiation, progress will be slow. In negotiations as in everything else, knowledge is competitive advantage. If you understand and use these terms – you join the club.

A brief perusal of the contents will see coverage of terms used in investment and finance, accounting, capital markets, project and corporate finance, procurement, public policy and regulation, public economics, the law and other disciplines. It was accumulated from margin notes, technical articles, product disclosure statements, reports, conferences, lectures, student assignments, meetings, the media, discussions, negotiations, arguments and professional practice over 30 years. It was edited to limit application to the infrastructure sector.

This paper is work-in-progress and will be periodically revised to pick up terms that I have missed, to fix errors or changes in meaning and to add new terms. The likelihood of new words and meanings appearing in the future is a certainty. Comments, suggestions and advice about improvements are welcome and all contributions will be acknowledged. Responsibility for errors, omissions and other misdemeanours rests with me.

Michael Regan, 4 January 2010.

AAA A term used to measure the credit rating of a country, corporation, a project or security. It indicates that the obligation has the highest rating. The obligor's capacity to meet its financial commitment is very strong (Standard & Poor's 2007, Long-Term Credit Rating).

Aaa A credit rating accreditation of Moody's Investor Services. Aaa denotes a long term obligation (12 months or longer) of the highest credit standing with a low risk of default.

AA A credit obligation differs from AAA only in small degree. The obligor's capacity to meet its financial commitment is very strong (Standard & Poor's Long-Term Credit Rating). Moody's equivalent is Aa.

Accounting Rate of Return (ARR) Earnings of an enterprise or undertaking before interest and tax (after abnormal and extraordinary items and before lease payments) (EBIT) as a percentage of total assets at the close of the accounting period. ARR relies on an accounting valuation of assets and accounting rates of depreciation. See **Economic Rate of Return**.

AAS Australian Accounting Standard

AASB Australian Accounting Standards Board. The designation given to Accounting standards issued by the Board

AAV Assessed annual value

A A credit obligation that is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher-rated categories. However, the obligor's capacity to meet its financial commitment on the obligation is still strong (Standard and Poor's Long-Term Credit Rating).

ABARE Australian Bureau of Agricultural and Resource Economics

Abatement The withholding of all or part of a payment stream for non-

performance under a contract for the provision of goods or services. Abatement provisions exist in most public private partnership arrangements creating effective liquidated damages offset against payments due to the party performing under the contract. See **Mediation, Arbitration, Step-in right and Cure period**.

Abnormal Expenses Outgoings included in operating profit (or loss) after income tax, which are considered abnormal by reason of their size and effect on the operating result

Abnormal Revenue Income included in operating profit (or loss) after income tax, which are considered abnormal by reason of their size and effect on the operating result

ABS Australian Bureau of Statistics

ACCC See **Australian Competition and Consumer Commission**

Accelerated depreciation is a rate of depreciation that exceeds reasonable wear and tear. To stimulate investment, governments may offer accelerated depreciation to companies which has the effect of bringing forward tax deductions not otherwise available to later years.

Acceleration clause is a provision in a finance or mortgage agreement that causes the principal and interest to be immediately due and payable in the event of default such as failure to pay interest when due or a breach of the loan agreement.

Acceleration principle A theory that the level of investment varies directly with the rate of change of output i.e., investment will be proportional to the rate of change of output, at all levels of output. This is related to absorption theory which analyses a country's balance of payments by comparing its total output with its absorption or domestic expenditure on goods and services. Domestic absorption is said to equal consumption plus investment plus public expenditure. Autonomous

investment theory refers to investment expenditure which is not induced by changes in output, such as public investment on infrastructure.

Access agreement or arrangement

An arrangement by the owner of infrastructure setting out the terms, conditions and tariffs under which third parties may access the asset. For example, the owner of a gas pipeline may enter into an arrangement with independent gas producers for use of the pipeline.

Accrual accounting A method of accounting that takes into account income and expenses incurred but not yet paid. The method recognises the future effects of revenues, expenses, assets and liabilities.

Accrued interest Accumulated interest on a loan that remains unpaid.

Active investor is an investor willing to participate or assume executive responsibilities in an undertaking.

ADB Asian Development Bank

ADSCR Annual debt service coverage ratio is a measure of a project's capacity to meet its debt service obligations each year. See **DSCR**.

Ad valorem refers to a charge or tax calculated by reference to the value of the underlying transaction or asset.

Advanced payment agreement A contract for the future supply of goods or services. In project finance, it may describe a contract for the long-term acquisition of energy to operate a plant or the supply of output from the plant (also described as an off take agreement).

Adverse selection When asymmetric information (one party has more knowledge about the object of a transaction than the other) affects bargaining power and the quality or price of the good or service being traded. This leads to an exchange advantage.

Adversarial contracting describes contracts that do not align the

objectives and the incentives of the principal and the contractor. For example, a construction contract in which the winning bidder is selected solely on the basis of the bid price. The contractor is incentivised to complete the project at the lowest possible price and contest variations to maximise its margin. The principal is incentivised to pay the lowest price and will rely on a rigid input specification to measure performance. These contracts are often based on penalties for non-compliance rather than incentives for improved performance with the risk of high dispute resolution costs compared with collaborative procurement methods. Adversarial contracts do not encourage collaborative design or construction innovation, new technology, and there is limited scope to reduce lifecycle costs during the construction process.

AES Australian Economic Statistics published by the Reserve Bank of Australia

AER See Australian Energy Regulator

Agency A contractual based fiduciary relationship that exists between a principal and a party appointed to act as representative of the principal and contract with third parties on the principal's behalf. Examples of agency include real estate agents, stockbrokers, bankers, insurance brokers, accountants and lawyers.

Agency bank A bank which arranges with credit facility through a consortium of lenders.

Agency costs are costs arising from the contractual relationship between a principal and agent including the cost of commissions, contract formation and administration. Agency costs are taken into account when determining enterprise transaction costs which influence decisions about firm size and location.

Agency theory A body of theoretical knowledge that concerns itself with the

contractual relationship between a principal and an agent. The costs of agency include commissions, supervision and potential loss when an agent acts in self-interest ahead of the interest of the principal.

Age pyramid A diagrammatic representation of the age structure of a population usually in intervals of 5 year age groups. Typically, the age structure approximates the shape of a pyramid because mortality progressively reduces the number in each birth cohort as it ages. The age pyramid is an aid in planning future demand for social infrastructure services such as health services, aged housing, primary and secondary schools and financing investment in the tertiary education sector.

AGFCF Adjusted gross fixed capital formation. A statistical term that refers to gross fixed capital formation less the dwellings component.

AIVLE Australian Institute of Valuers and Land Economists

ALGA Australian Local Government Association

Alliance contract. See Relationship Contract.

All-in rate is an interest rate that includes the lender's margin (or spread) and all fees.

All-paper deal refers to takeover bids when the bidder offers to buy shares in a company in exchange for its own securities.

Alpha An indicator used in real estate analysis that is the ratio of the actual selling price to the listed sale price. It is a measure of market discounts and is used to predict future changes in demand.

The return that a security or a portfolio can be expected to earn if the market rate of return were zero.

Amortisation The extinguishment of a debt or write-down the value of an asset over a period of a time such as the term of a loan or a lease of land.

Annual Report The primary accountability document of an organisation that is available to the public and which summarises operating achievements and financial results for an accounting period or financial year. Annual reports (in the prescribed form) are a requirement under the *Corporations Act (Cwlth.)* and Australian Stock Exchange Listing Rules. Annual reports may also contain a summary of the organisation's activities in the period covered by the report and a business plan for the future.

Annuity The lump sum purchase of a future income stream. Annuities are favoured by retirees who wish to convert a lump sum retirement payment to a long-term stream of interest bearing periodical payments.

Annuity bond is a security which evidences the repayment of principal and the payment of interest over a specific period of time. Annuity bonds may be used to finance large infrastructure projects and may be structured with various interest rate, currency, indexation, maturity and capital guarantee options. The purchase price (or present value V of an annuity depends on the rate of interest employed in the formula:

$$V = A [1 - (1 + i)^{-n}] \text{ divided by } i$$

where i is the rate of interest, and n is the number of periods that the annuity is paid.

ANZSIC Australian and New Zealand Standard Industrial Classifications – a system for the classification of industries and sectors.

Appraisal The process of defining objectives, examining options and weighing up the costs, benefits and uncertainties of those options before a decision is made (Government of Victoria, 2008, *Investment Lifecycle Guidelines*, Department of Treasury and Finance, Melbourne).

Arrangement fee A fee paid to a financial intermediary for arranging finance.

ARV Asset residual value. The realisable value of an asset or business at the end of the tenure or investment period.

Arbitrage The trading of securities (currency, futures, derivatives and commodities) in several markets at the same time with a view to profiting from differential movements in prices between these markets. The term also describes investments that assume an offsetting or risk mitigation effect.

Arbitrator A person appointed to resolve disputes by the parties to an agreement. An arbitrator may be nominated in the agreement or appointed by a third party or a judicial officer. An arbitrator is expected to act with independence, fairness and impartiality. Arbitration provisions may be voluntary or required under an agreement, binding or subject to appeal depending on the terms of the agreement or appointment. Arbitration is generally viewed as a lower cost option than recourse to conventional litigation.

Arbitrage pricing theory (APT) A method for the pricing of listed securities. APT models the expected return from a security using the coefficient for a number of macroeconomic variables including proxies for short-term interest rate, the yield curve, stock market indexes and currency exchange rates. APT is an alternative pricing tool to the **Capital Asset Pricing Model**.

Arm's length A term that describes the relationship between parties as if they were strangers and dealing in an open market without special obligation or connection toward each other. An arm's length consideration refers to fair market consideration.

Arranger An intermediary, who structures, negotiates and/or underwrites the syndication of lenders for a project or corporate loan facility.

Asset A generic term that describes tangible or intangible property that has economic value to its owner.

The service potential or future economic benefits controlled by a person or entity as a result of past transactions or events. Assets may be physical (example, plant, equipment or buildings) or non-physical (financial securities). Assets may also be current (having a store of service potential which is consumed in one year or less) or non-current (having a store of service potential that is consumed over a period of more than one year) (Government of Victoria, 2008, *Investment Lifecycle Guidelines*, Department of Treasury and Finance, Melbourne). See **Capital**

Asset-backed securities Securities that are collateralised with a group of assets. See **Collateralised debt obligations, Securitisation**.

Asset class Assets that share similar investment and financial characteristics. The main asset classes are listed and unlisted shares (equities), interest-bearing securities including government bonds, listed property (listed property trusts (**Lots**) or real estate investment trusts (**REITS**), and real estate. Infrastructure is now widely regarded internationally as an asset class

Asset allocation In a portfolio fund, the allocation of capital to various asset classes such as interest bearing securities, direct and indirect real estate, listed and unlisted equities etc.

Asset-backed securities. See Securitisation

Asset management framework A management tool that allows administrators to exercise greater strategic control over an asset with a focus on adapting the asset base to better support output delivery. The framework has a series of linked strategies (service strategy, asset strategy and multi-year strategy) that guide investment planning in government departments and

agencies (Government of Victoria, 2008, *Investment Lifecycle Guidelines*, Department of Treasury and Finance, Melbourne).

Asset sweating Maximising the utility or value of assets.

Asset warehousing The practice of a party owning and maintaining an asset effectively as agent for a principal. For example, a listed property trust cannot easily hold land banks for future development without adversely affecting short-term leverage or return. An asset is acquired by an agent and held against put and/or call option arrangements with the objective of passing transferring title at a future date. The purchase price includes capitalised interest and other holding charges plus a warehousing fee.

Assignment The transfer of an interest or title to property in writing from the assignor (transferor) to the assignee (transferee). Most property is capable of assignment including a chose in action, a contract or a right to present or future income.

Assumptions A hypothesis in relation to unknown future events or metrics. Assumptions are estimates of future performance or conditions that rely on best estimates rather than factual references. The assumptions used in new resources projects would generally include the cost of production inputs such as transportation and energy prices, fixed and variable costs, the service life of new technologies, commodity prices, and interest currency exchange rates. See **Risk**.

Asymmetrical information This term describes a transaction in which a participant has the advantage of knowledge not available to other participants. For example, insiders who trade in listed securities with knowledge about future events that will have a material impact on security values when the knowledge becomes available to the whole market.

ASX The Australian Securities Exchange Limited (formerly, the Australian Stock Exchange Limited).

At call Payable on demand. A reference to money that is repayable at the demand of a depositor or lender.

At par The nominal value of a security.

Auction The public sale of real or personal property to the highest bidder. There are four basic types of auction, (a) the ascending order or English auction in which bidders' raise the price successively until one bidder remains, (b) the descending bid or Dutch auction, (c) the sealed bid auction in which each bidder makes a single written bid and, (d) second price sealed bid auction in which the property is sold to the bidder offering the highest price and the price paid is that offered by the underbidder.

Auction theory The underlying revenue equivalence theorem suggests that the seller can expect the same price on average from each of the standard (and non-standard types of auctions) and buyers are indifferent between them all (Klemperer, P. 2004, *Auctions: Theory and Practice*, Princeton University Press, Princeton, N.J.).

Australian Competition and Consumer Commission (ACCC)

Auction theory The study of auctions as a market for the exchange of goods and the determination of equilibrium prices that is closely related to game theory.

Availability charge In BOT and PPP contracts, this is a fixed charge for the use of building and/or equipment. See capital charge. See **capital charge**.

A method of payment under a PPP contract where the franchisee is paid by the State on the basis of the availability of an asset or service. For example, in PPPs for public hospitals, the franchisee is remunerated on the basis of bed availability irrespective of

whether the hospital uses that bed on the day.

A fixed-charge element of a tariff that is payable whether or not the product or service is required and is intended to cover debt service and equity return in long-term contracts (Yescombe 2007, Public Private Partnerships)

Average total assets Average of the value of assets at the beginning and the end of a reporting period.

BAFO Best and Final Offer A point in procurement, contract negotiations or a tender bid process when the party calling for bids invites resubmissions. BAFOs and BARFOs (best and really final offers) are usually called after initial bids are submitted and there is an exchange of information between the principal and the bidders.

Balloon payment A loan arrangement whereby repayment of principal occurs in the latter stages of the loan term and in some cases, on termination. An interest-only loan is an example of a balloon payment facility.

Base case In financial modelling and forecasting, the base case is a realistic option that involves the minimum expenditure to sustain optimal levels of output or service delivery.

The lender's financial projections of a project cash flow at or shortly before financial close (Yescombe 2007, p. 335).

Base load The non-peak output of an energy generator that is available 24 hours a day and subject to long-term supply contracts. Additional output designed to meet increased consumption during periods of high demand is described as peak load and this output is generally priced at spot or prevailing market prices.

Basis point One-hundredth of one percentile. A loan with an interest margin (or spread) of 0.98 cents is described as 98 basis points.

BBB A credit rating that exhibits adequate protection parameters.

However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment (Standard & Poor's Long-Term Credit Rating). Credit ratings at level BBB and higher are rated as investment grade.

BB A credit obligation that is rated speculative although less vulnerable to non-payment than other (lower rated) securities. However, it faces major ongoing uncertainties or exposure to adverse business, financial or economic conditions, which could lead to the obligor's inadequate capacity to meet its financial commitments on the obligation (Standard & Poor's Long-Term Credit Rating).

B A credit obligation rated B is more vulnerable to non-payment than obligations rated BB but the obligor currently has the capacity to meet its financial commitments on the obligation. Adverse business, financial or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitments on the obligation (Standard & Poor's Long-Term Credit Rating).

BCA Benefit cost ratio. See **Benefit cost analysis**.

BDB A bid, design and build contract.

BDBB A contract that has two distinct components (which may be let to the same contractor) – a bid design component and a bid build component.

BDBO A bid, design, build and operate procurement contract.

Bellwether A security that provides a reference point for other securities in a capital market as a proxy for future economic and business conditions. A **bellwether bond** is a long-dated debt instrument that provides a benchmark for security pricing and a long-term yield curve.

Benefit The value that accrues to or is generated by an asset or an investment in either financial or non-

financial terms. For example, the qualitative benefits that flow from PPP projects may include innovative design, construction or additional service outputs. Benefits are measured against key performance indicators.

Benefit cost analysis A process of identifying, measuring and comparing the benefits and costs of an investment project or program (Campbell, H. Brown, R. 2003, *Benefit Cost Analysis*, Cambridge University Press, Port Melbourne). For these purposes, costs and benefits are expressed in monetary terms although they may be social in nature and the analysis is conducted over the life of the investment and employs discounted cash flow methodology.

The evaluation of an investment project with a long-term perspective from the viewpoint of the economy as a whole ... by comparing the effects of undertaking the project with doing nothing (Rutherford, D. 2002, *Routledge Dictionary of Economics*, 2nd edn. Routledge, London).

Cost benefit analysis is a technique that can express in a comparable (monetary) way the net effect of the costs and benefits associated with an investment proposal (Government of Victoria, 2008, *Investment Lifecycle Guidelines*, Department of Treasury and Finance, Melbourne).

Best practice The practices of leading-edge organisations to manage and organise their operations to deliver leading international performance in areas such as quality, cost, timeliness and efficiency.

Beta A measure of the volatility and/or correlation of the return or price performance of a security with the market as a whole. Beta is generally used as a proxy for the systematic or market risk of listed enterprises or its securities.

Bid costs The costs incurred by contractors and consortia bidding for major project tenders. These are

significant (accounting for up to 3% of project costs) and bidders must maintain sufficient **EBITDA** headroom to meet these costs throughout the year. To minimise the industry effects of high bid costs, tenders may be limited to two or three bidders selected from a less costly **EoI** process to help maintain depth in the bid market.

Big-firm capitalism An alternative term for oligarchic capitalism in which the markets in a country are dominated by a small number of closely held corporations with close ties to the state. Singapore is often used as an example of big-firm capitalism.

Big-firm economies tend to be powered by national champion firms that are selected or promoted by the state stemming from the belief that only such firms can realise the economies of scale, technologies and human capital resources to take on powerful global competitors (taken from with additions: Baumol, W.J. Litan, R.E. Schramm, C.J. 2007, *Good Capitalism, Bad Capitalism and the Economics of Growth and Prosperity*, Yale University Press, New Haven).

An economy which is dominated by large listed corporations. In these economies, a significant component of state policy is directed to promote the performance and interests of the corporate sector and institutionalised special interest groups such as the farm lobby. Big-firm capitalism is employed in varying degrees in many of the world's largest economies over time including the United States in the 1970s and 1980s, Britain in the latter part of the 19th Century, the European Community and Japan.

BLT Build lease transfer or bacon, lettuce and tomato (toasted) sandwich if you're hungry.

Bond An interest bearing debt security for a specific term.

BOO Build, operate and own an infrastructure asset under a long-term contract with the state. All risk resides

with the contractor and assets form part of industry supply chains. Residual asset ownership vests in the contractor. Examples include gas pipelines, electricity generating plants, telecommunications networks.

BOOT Build, operate, own and transfer an infrastructure asset under a long-term contract with the state. The contractor carries operational risk with ownership passing to the state at the end of the contract. A vehicle commonly used to franchise infrastructure service delivery with the contractor's return on investment sourced from user fees or payments by the state.

BOT Build, operate, transfer. The contractor finances the provision of an infrastructure asset and provides services to the state pursuant to a long-term contract. Residual ownership vests in the state. Operational risk carried by the contractor. Frequently used to provide networked assets in supply chains in the energy and transport sectors.

Bridging loan Temporary or interim finance that is arranged to meet a short-term requirement until replaced by a longer-term loan. A construction loan for a PPP project is a form of short-term bridging finance which is replaced by longer-term finance on practical completion.

Broad money The sum of M3 (currency plus bank deposits of the private non-bank sector) and non-bank financial institution (NBFIs) borrowings, less holdings of currency and bank deposits by NBFIs.

Brownfield project A project that is a redevelopment of an existing industrial facility or situated at an existing industrial location.

BTCE Bureau of Transport and Communication Economics now the Bureau of Transport and Regional Services.

BTO Build, transfer, operate. A contract under which a contractor

provides an infrastructure asset and enters into a long-term contract for its management. The contractor carries design/warranty risk attaching to asset delivery and the state assumes lifecycle costing and demand risks. The approach is widely used for the delivery of non-core social infrastructure services in the health, justice and education sectors.

Bundling projects The practice of aggregating a number of smaller like projects to achieve greater economies of scale in procurement. Bundling reduces bid costs, improves the efficiency of contract administration and cost savings not possible with a large number of smaller tenders.

Business case The business case sets out the overview of the rationale supporting a new project or investment and contains a preliminary view on how the project will be delivered. It also contains an analysis of the various impacts of the project and an indication of the likely level of market interest. The business case provides information allowing management to support the proposed project before significant resources are spent on its development (Government of Victoria 2003, *Contract Management Guide* Partnerships Victoria Guidance Material, Department of Treasury and Finance, Melbourne).

A document that forms the basis of advice for executive decision-making for an investment. It may take the form of a document that (a) identifies the output specification or service need and objectives sought from the investment (the strategic assessment), (b) identifies and evaluates the options for achieving this, and (c) contains an assessment of the preferred course of action to meet the service need supported by a financial forecast, the assumptions on which the forecast is made, a risk management plan and a plan and schedule, as required.

Butterfly contract A contract that includes another contract in identical terms.

Call option An option by which the grantee has the right to buy property from the grantor (generally at a predetermined price) within a specified period or at a point in time.

Cap A form of interest rate hedging which sets a maximum rate. See **collar**.

Capacity charge See **capital charge**.

Capex Capital expenditure.

Capital A widely used term that includes in its meaning a factor of production, a sum of money and the financial infrastructure and the resources of an enterprise or institution. Capital is also used to describe the tangible and intangible assets of a country or an enterprise such as human capital which refers to a trained and educated workforce. Capital stock refers to an inventory of fixed assets.

Capital asset pricing model (CAPM)

A method for calculating the cost of equity in capital markets. The CAPM derives the cost of equity by adding to the risk-free rate (of interest) a premium for risk. The risk premium is itself a product of the equity market risk premium (which is the measure of the reward required by investors to buy an equity security) and the security's beta (a measure of the relative systematic risk of the particular equity security being secured). The CAPM suggests that the cost of equity will vary between securities only to the extent that they bear differing degrees of risk (Ogier, T. J. Rugman, L. Spicer 2004, *The Real Cost of Capital*, FT Prentice Hall. London, p. 18).

Capital charge A payment made by a party to a contract for another to provide fully serviceable buildings, plant and equipment. For example, under a long-term waste management agreement, the contractor may be required to furnish fully operational recycling plant. The operator is paid a charge negotiated to provide a return on its capital cost irrespective of the level of use by the community or the

council. See **availability charge**, **unitary charge**.

Capital deepening An increase in an economy's capital: labour ratio. This can be achieved, for example, with new investment in more efficient plant which will increase output without additional labour inputs.

Capital expenditure Outlays on new assets and money spent on improvements and replacement to all or part of the components of an assets. Capital expenditure does not include **sunk costs** which may, however, be capitalised into the project for accounting purposes.

In Australia, most capital expenditure is depreciated for taxation purposes unless eligible for an immediate capital allowance.

Capital intensive assets Assets characterised by a high ratio of non-current assets to revenue from ordinary activities, high earnings before interest, tax, depreciation and amortisation (EBITDA) to revenue ratio and low variable costs. For example, infrastructure service industries and commercial property.

Capital intensity ratio (CIR) The ratio of a corporation's non-current assets to its revenue from ordinary activities.

Capitalised interest Interest that has accrued in respect of a loan and which is periodically added to loan principal.

Capitalism. A market economy. See **Big-Firm Capitalism**, **Oligarchic Capitalism**, **State-Guided Capitalism**, **Entrepreneurial Capitalism**.

Capital markets A term that broadly describes various financial markets including the Australian Stock Exchange, the bond market, the Sydney Futures Exchange, foreign currency trading and the market for corporate bonds. Technically, it refers to longer term debt markets. Money market is also used to describe transactions in short-term securities.

Capital output ratio The ratio derived by dividing the level of output into the capital stock required to produce it.

Capital productivity The output produced for a given inventory of capital stock. To increase capital productivity, the manager will attempt to increase the quantity or quality of output without increasing investment in capital stock.

Real GDP per unit of capital services used in production. Capital productivity estimates are indexes of real GDP per unit of capital services used in production. The estimates are derived by dividing the indexes of the chain volume measure of GDP by an index of capital services. The capital productivity indexes reflect not only the contribution of capital to changes in production, but also the contribution by labour and other factors affecting production (Australian Bureau of Statistics 2005, *Australian System of National Accounts*, Ref. No. 5204.0, Canberra, p. 115).

Capital service fee A term that describes the proportion of a payment made under an outsourcing agreement for the provision or availability of fixed assets. A capital service fee is the non-incentive based component of total remuneration calculated by reference to the value of the assets furnished under the arrangement.

Capital stock A inventory of capital or fixed assets of a firm or economy. Capital stock aggregates usually include buildings, plant and equipment, industrial property and livestock. Gross capital stock equals net capital stock plus new investment (GFCF) less retirements (COFC) and depreciation.

CAPM Capital Asset Pricing Model. A method for calculating the cost of equity capital of a listed enterprise. See **Capital Asset Pricing Model**.

Carbon trading A term that describes a carbon market created specifically for organisations to trade carbon emission quotas or credits. Companies

that exceed their emission target can acquire carbon quotas from companies that have emitted less carbon than their quota allows. As the overall emission level is reduced, the market mechanism creates a higher price for carbon quotas creating an incentive for organisations to reduce their carbon emissions.

Carbon offset An activity that generates credits that may be offset against the carbon emissions of an organisation. Carbon offsets may include the planting of trees or conversion to low or zero carbon-emitting alternatives in related processes. Carbon offsets such as afforestation programs are referred to as carbon sinks.

Carbon sequestration The disposal or storage of carbon in the natural environment including depleted underground oil and gas reservoirs and the manufacture of carbon-based products for use in soil enrichment and agricultural purposes.

Cascade, cash cascade See **cash waterfall provisions**.

Cash flow Aggregate movement in the flow of funds into and out of an enterprise or establishment. Net cash flow is the difference between revenue and expenses and is a measure of the net cash available to service equity and debt capital providers.

Cash sweep A process for the automatic clearance of cash accounts to meet debt servicing obligations.

Cash traps Sinking funds set up to provide capital reserves for specific purposes. such as extraordinary maintenance, unplanned asset replacement and other contingencies. See Liquidity Accounts.

Cash waterfall provisions In project financing applications, the term describes the prioritising of net cash flow from an enterprise or undertaking to ensure that debt servicing for example, takes priority over dividends to shareholders and other purposes.

CBA See Benefit Cost Analysis

CCNCO Commonwealth Competitive Neutrality Complaints Office.

CDO Collateralised debt obligation.

CDS Credit default swap. A security that effectively assigns the credit default risk associated with a loan. The credit default swap rate measures the effective risk premium associated with a country or an organisation and is a more spontaneous indicator of credit risk, for example, than a credit rating.

Ceiling price The price determined by a regulator as the full economic cost of providing a service including a reasonable return on capital.

CGF See Credit Guarantee Finance.

Chain volume measure See CVM

Change in law A change in state policy or the enactment of a new law or amendment to an existing law after a contract is entered into (Partnerships Victoria 2001, *Risk Allocation and Contractual Issues*, Department of Treasury and Finance, Melbourne, p. 91).

CIR Capital intensity ratio. The ratio of gross ordinary revenue to non-current assets.

CoAG Council of Australian Governments established in 1992. The peak intergovernmental forum in Australia comprising the Prime Minister, State Premiers, Territory Chief Ministers and the President of the Australian Local Government Association.

Coase theorem A hypothesis put forward by economist Ronald Coase that suggests economic efficiency will be achieved as long as property rights are allocated, preserved and freely traded.

COFC Cost of fixed capital or depreciation of capital stock.

Collaboration A cooperative working relationship that involves clients and their contractors working closely together often under long-term

framework arrangements using non-adversarial contracts and a joint approach to project management, risk management and cost control.

Collaborative contract A construction or management contract that employs collaborative principles such as a fixed contractor margin,

a mutually calculated target cost, joint project management, and “open book” accounting principles.

Collar A term used in finance which describes hedging arrangements that limit the borrower’s exposure to rate volatility by setting a maximum (a cap) and a minimum (floor) rate of interest.

Commercialisation A process whereby government agencies, business units, boards and authorities are restructured along commercial lines. This generally involves adoption of a corporate business model and practices, the adoption of commercial objectives and business planning methods, independent management, private sector accounting standards and competitive neutrality principles. Corporatisation permits **GBEs** to align costs of production and output pricing and greater use of market indicators as a measure of firm performance. See **corporatisation**.

Commonwealth Grants Commission (Australia) A statutory authority set up to determine the States’ share of general revenue and grants paid by the Commonwealth.

Competition policy One of the major initiatives adopted by the Commonwealth and the States and central to the microeconomic reform agenda of the 1990s (National Competition Policy Reform Act 1995 (Cwlth.)). The policy involves regulatory reform with a view to improve the flexibility and competitiveness of the Australian economy and create a common national market for goods and services. The policy applies to public and private corporations and includes the opening up of government services to private providers. In

relation to government business units, the guidelines require independent regulation of output prices and the adoption of corporatisation and competitive neutrality principles. See King, S. Maddock, R. 1996, *Unlocking the Infrastructure, The Reform of Public Utilities in Australia*, Allen & Unwin, St Leonards.

Competitive neutrality A branch of Australia's competition policy reforms that attempts to remove the advantages of state ownership over private firms such as exemption from State and Commonwealth taxes, reporting and disclosure requirements and regulatory frameworks. The object of competitive neutrality is to place government business enterprises (**GBEs**) on the same competitive footing as private sector businesses. Competitive neutrality requires governments to meet the cost of community service obligations (**CSOs**), apply tax equivalence in the form of the corporate tax regime for private companies, and charge GBEs for guarantee fees and other specific inter-government services.

Competitive tendering The process of selecting a preferred supplier from a number of potential suppliers who submit tenders or offers which are then evaluated against predetermined selection criteria.

Competitive tension The tension or competitive pressures created by deferral of the announcement of a winning bidder until the last possible moment. A bid process may be subject to best and final offer (BAFO) or best and really final offer (BARFO) which maintains competitive tension in a protracted tender process. Early announcement of a successful bidder is said to reduce competitive tension and reduce the final negotiation bargaining power of the party conducting the tender.

Completion guarantee A bond furnished by a contractor or sub-contractor that provides liquidated

damages in the event of failure to complete the contract.

Compulsory competitive tendering (CCT) A legislative requirement stipulating that competitive tenders must be used for the procurement of goods and/or services either of a certain type or above a certain value.

Concession A franchise or exclusive right. In the infrastructure and PPP context it refers to contracts for the provision of assets or services usually on an exclusive dealing basis for a period of time. Most PPPs are franchises for the provision of goods and services by or on behalf of government.

Concurrency Risk The risk that an investor assumes with long-term fixed assets such as non-residential property and infrastructure. It describes risk associated with the expiry of time such as leasehold title, a franchise, a loan, the maturity of revenue streams, a tenant lease or a supply contract. Concurrency risk is the simultaneous occurrence of one or more risks and is managed with specific risk maturity scheduling.

Conditions precedent Conditions in a contract that must be met before the contract is effective. Conditions subsequent are conditions that must be complied with after the contract takes effect.

Consortium An informal or formal arrangement or contract for two or more firms to enter into an undertaking. Bids for public private partnerships are mostly consortium bids involving construction companies, designers, facility managers, equity investors and consultants. A consortium, generally through a special purpose vehicle (SPV) such as a company, contracts with a government agency for the long-term delivery of a service to specification and each member will enter into separate contracts with other consortium members in relation matters that may include (a) the

services to be provided to the consortium, (b) debt financing of the undertaking and (c) the relationship and participation in consortium decision-making.

Contingency Unallocated reserves in a capital expenditure budget and sourced from standby debt finance or a capital reserve.

An allowance or reserve to meet unforeseen circumstances.

Contract Management See **Contract administration**.

Contracting out The procurement of goods and/or services from other firms. In large project procurement, most specialist information technology, professional services, plant and construction components are outsourced to firms specialising in these fields.

Convertible securities, convertible notes Debt securities that vest the holder with a call option to convert into equity capital in the issuing corporation. Convertible notes may be convertible or automatically convert.

Core economic infrastructure The infrastructure assets that are essential to the functioning of the economy such as ports, road and rail networks, energy, dams and water supplies.

Core services The essential services delivered by economic and social infrastructures.

In PPPs, the term generally refers to services traditionally provided by government as public goods. For example, the provision of teachers and teaching services in public schools. In the case of a public hospital, core services are those delivered by staff of the hospital - doctors and nurses, paramedics and professionals. Non-core services refers to collateral services that enable the school or hospital to operate such as the provision of buildings and equipment, maintenance and repairs, waste management, security, catering and car parking activities.

Corporation A body corporate having an existence separate to its members.

Corporatisation A term that describes the process whereby government agencies, boards and authorities are restructured as statutory corporations or corporations registered under the Corporations Act (Cwlth.). Corporatisation has several effects including (a) independent legal status, (b) uniformity of accounting, reporting and disclosure standards, (c) separation of enterprise ownership and management, and (d) imposes statutory duties on directors and officers of the corporation.

Cost benefit analysis (CBA) See **Benefit Cost Analysis**.

Cost of capital The cost of capital has two meanings in the context of major project procurement. First, the cost of capital used by the private sector refers to the *actual* cost of equity, debt and mezzanine capital that is employed in new investment. The actual cost of capital is ascertained using the weighted average cost of capital (WACC) which is the cost of equity, debt and mezzanine capital and their contribution to total capital requirement. In the public sector, governments generally price their actual cost of capital at the government's marginal cost of debt which is generally the prevailing bond rate. The second use of the term is to describe the investor's opportunity cost of investment which is the return available from alternative investments with a similar risk profile. In this sense, cost of capital is used as a target rate of return or hurdle rate for the investing firm. Governments generally price their investment cost of capital at the social time preference rate which is an estimate of the price that a community would pay to defer immediate consumption. See **Weighted Average Cost of Capital, Rate of Return (ROR), hurdle rate**.

Coupon Describes the interest rate payable on a financial security such as a bond.

Cost effective analysis (CEA)

compares the costs of alternative ways of delivering a particular outcome.

CPI Consumer Price Index – a “retail” or headline measure of inflation.

CPI-X and CPI-R Infrastructure output pricing formulae that operates to limit or cap output pricing.

Credit enhancement See **credit wraps**.

Credit guarantee finance is a form of project financing run as a pilot program in the United Kingdom. Under this arrangement, the state assumes the role of senior debt provider on an “arm’s length” basis to the project sponsors. See **supported debt model**.

Credit rating An independent assessment of the likelihood of credit default of an enterprise or undertaking by a credit rating agency. The credit rating assigns a credit rating which plays an important role in the pricing of the rated enterprise’s securities.

Credit risk The risk of default under debt financing arrangements by an enterprise or undertaking.

Credit wraps, credit wrapping A form of credit insurance that enhances the creditworthiness of a transaction. For example, an organisation or a security issue with a credit rating less than AAA pays a fee to an AAA rated monoline insurer who will guarantee the default risk to lenders. Credit wraps permit the issuer of securities (or borrower) to raise debt at a lower cost than would otherwise be available using the underlying credit rating.

Cross-collateralisation The practice of arranging a borrower’s loan security arrangements whereby default under one facility automatically triggers default under all securities provided by the lender.

Cross-indexation The alignment or **matching** of revenue and payment streams in such a manner that the risk of inflation is managed with both. For

example, indexing a revenue stream and payments under an **O&M** contract for lifecycle asset maintenance.

Crowding out The view that high levels of public sector activity in the economy (such as increased public expenditure) has an adverse impact on private sector demand. This can also apply to markets where Keynesian style budget deficits increase Treasury activity in the capital market which increases interest rates and so “crowds out” private activity such as capital raisings, investment and expenditures.

CSO Community Service Obligation. The discounted social benefit that is provided by government to disadvantaged sections of the community and may take the form of concessional government charges for utility and public transport services. The cost of CSO’s are met either by explicit government payment of the concession or cross-subsidies from charges applied to non-disadvantaged users of the service. CSOs are the principal reason for poor financial performance of many government business enterprises.

Cure period A period during a construction or service contract in which the contractor or franchisee is under notice to remedy a breach of contract or performance failure before penalty provisions apply.

CVM Chain volume measure is a revaluation of economic data economic data in such a way as to remove the direct effects of changes in their prices over the period under review. Chain volume measures for GDP and other aggregates are obtained by linking together (compounding) movements in volumes, calculated using the average prices of the previous financial year, and applying the compounded movements to the current price estimates of the reference year.

Cycles The movement in one or more indicators above and below a long-term trend path. Cycles occur for most indicators and reflect imbalances that exist in the conditions affecting the indicator (such as supply, demand and prices). Some indicators experience short-run oscillations around the trend (short-wave cycles) such as private investment and inflation, whilst others experience long-term oscillations such as government fiscal and electoral cycles, currency exchange and interest rates.

The business cycle refers to change in national income caused by periodic imbalances of (a) demand over supply (expansionary or boom cycle) characterised by growing demand for labour and materials, declining inventory and rising prices (b) periodic imbalances of supply over demand (contracting or recessionary cycle), characterised by oversupply, growing unemployment, falling prices and capacity under-utilisation.

Many other variables operating in the economy also follow cyclical patterns including private investment, research and development activity, money supply and interest rates and business regulation.

D&C A design and construct contract.

DBBO A procurement employing design, bid, build and operate principles.

DBFO Design, Built, Finance and Operate. A term used widely in Britain that refers to BOOT transactions or long-term contracts under which a contractor furnishes an asset, provides its management and delivers infrastructure services to or on behalf of the state. Operational risk vests with the contractor. These arrangements are also known as concessions or franchises in Britain.

DBFM Design, build, finance and manage.

DCF See Discounted Cash Flow.

DCM Design, construct and manage.

Deadweight cost The cost borne by the state when it raises taxes or borrows to finance its investments or services. Deadweight costs may be direct (the cost of professional advisers, transaction costs) or indirect (the negative or distortionary impact of state borrowings in domestic capital markets and the effect that taxes may have on private savings, investment and incentives).

Deal flow The argument that for government or industry to maintain steady growth and maintenance of specialist skills in a regional economy, it is essential to stage the delivery of projects in such a manner that there is neither a shortage of work (contributing to loss of skilled workers to neighbouring regions) or too many projects at the same time (leading to skills shortages and rapidly increasing labour costs).

Debt A generic term that described all forms of borrowings.

Debt service The payment of interest and principal obligations under a loan agreement.

Debt service coverage ratio (DSCR) The ratio of net cash flow to debt servicing obligations. See also **annual debt service coverage ratio (ADSCR)**,

Debt to equity ratio The ratio of outstanding debt liabilities to equity capital.

Debt to total assets The ratio of outstanding debt liabilities to total assets.

Deep discount security A security that is issued, redeemed or traded at a price significantly below face value.

Default An event that changes the rights of the parties to an agreement or triggers other, specified events or outcomes. In a PPP contract, for example, a default event may include the failure to provide a service by a given date. Subject to the provisions of the agreement (including elections in relation to remediation or "cure"

provisions), the default may permit the State to determine the agreement or apply financial penalties. A default under one contract in PPP arrangements generally triggers defaults in collateral contractual arrangements.

The failure of a party to perform a contractual requirement or obligation, including failures to meet deadlines, to perform to a specified standard, to meet a loan repayment or to meet its obligations in relation to a materialised risk (Contract Management Guide 2003, Partnerships Victoria Guidance Material, Government of Victoria, Department of Treasury and Finance, Melbourne).

Demand In an economy, demand is the aggregate expenditure on goods and services by consumers, industry and government measured over a period of time. An indicator of demand is *final consumption expenditure* (see Australian Bureau of Statistics, 2007 *Australian National Accounts, Catalogue Number 5204.0*, Canberra). In 2005-06, final consumption expenditure was made up of households (63%), government 22% and business 15%.

The components of demand include (a) consumption expenditure (household disposable income, consumer wealth), (b) government outlays and capital expenditures, (c) net exports and (d) private domestic investment (Regan, M. 2007, *Infrastructure Economics, Procurement*, Working Paper 201, Mirvac School of Sustainable Development, Bond University).

Demand management The management of drivers of demand for goods and services. In economic terms, it refers to policies that manipulate aggregate demand for goods and services in order to smooth fluctuations in real gross domestic product, maintain high and stable employment levels and avoid inflation (Lewis, P. Garnett, A. Hawtrey, K. Treadgold, M. *Issues, Indicators and*

Ideas, A Guide to the Australian Economy, 3rd edn. Addison-Wesley, Frenchs Forest, Sydney).

At the project or industry level, it refers to policies that attempt to contain or smooth demand for goods and/or services. For example, in the electricity generation sector, it may include initiatives to reduce peak consumption by reducing tariffs for non-peak use or offering financial incentives to encourage wider use of solar power.

Demand elasticity The degree to which demand reacts to changes in price. Some infrastructure services feature relatively low demand elasticity (such as water and energy) whilst others may have substitutes and a change in price will have a significant impact on demand (toll roads, freight rail and ports).

Demand side A generic term that refers to demand in the economy and the rate of growth in demand.

Depreciation The recognition of the wasting nature of most non-current assets including buildings, earthworks, plant and equipment. Depreciation is measured on the basis of an asset's effective or economic life and an annual depreciation charge is entered into management and taxation accounts of the enterprise each year.

Deprival method of asset valuation A method commonly used by GBEs that values assets at an amount that represents the loss that might be expected to be incurred by an enterprise if it was deprived of the service potential or future economic benefits at the reporting date. As a general rule, deprival value equals the replacement cost less economic depreciation and is equivalent to the service potential of the asset. Service potential is generally ascertained using current market price or replacement cost. Where the asset is not replaced, the basis for valuation is the **NPV** of the cash flows from continued use and subsequent disposal of the asset. This

method requires asset revaluation every 5 years.

Deregulation The lifting of government interventions (including statutory and administrative authorities) over the activities and practices of businesses. For example, the lifting of foreign exchange controls and the opening of the Australian banking sector to foreign competition (1982, 1984).

Derivative is a group of financial transactions that provide risk management tools for exposures to interest rate, commodity and currency exchange rate volatility. Derivate products include swaps, options, futures and forward rate agreements.

Design, construction and commissioning risk The risk that the design, construction or commissioning phases of project delivery or procurement are carried out in such a way which results in adverse time, cost or service delivery outcomes. The consequences if the risk materialises may include delays and/or cost increases in the design, construction and commissioning phases, or design and construction flaws which may render the asset inadequate for effective service delivery, either immediately or over time (Partnerships Victoria 2001, *Risk Allocation and Contractual Issues*, Department of Treasury and Finance, Melbourne, p. 52).

Design life is the predetermined service life of an asset to be used for a specific purpose.

DFI Direct Foreign Investment. Foreign investment inflows. Also described as FDI or foreign direct investment.

Direct investment is investment in a wholly or jointly owned asset without the use of interposed ownership entities such as a company or trust. In real estate, the investor is entered as a sole or joint proprietor on the title deed.

Discounted cash flow (DCF) a technique for measuring investment that discounts the value of money over time. DCF is used in cost benefit analysis and to value long-term infrastructure projects. See **net present value**.

Discount rate the rate applied to discounted future costs and benefits (cash flows). The discount rate is the annualised adjustment to cash flow that is necessary to maintain current value.

The time value of money.

Distributions A pattern of occurrences in statistics. The square root of an occurrence is its standard deviation from observations of the group as a whole.

DIV Direct Investment Vehicle. An entity such as a company that facilitates direct or co-mingled investment in a capital-intensive asset.

DORC Depreciated Optimised Replacement Cost. A measure of asset value.

Dow Jones Index An index of performance data prepared for the top 500 listed companies in the United States.

Driver A generic term that generally describes the principal agent(s) that cause change. For example, major drivers of growth in developing economies include the rule of law, stable governments and sound public institutions that provide a productive environment for economic and human development.

Dry lease A lease under which the hirer undertakes most operational responsibilities. For example, a hire car. See **wet lease**.

DSCR Debt service coverage ratio – the multiple by which the cash flow available to meet a stream of future finance obligations exceeds the forecast debt servicing amount. The DSCR required by lenders is generally expressed as a multiple of the

anticipated debt service requirement (x1.5).

DSRA Debt service reserve account is a sinking fund created at initial capitalisation and/or from revenue and designed to meet shortfalls in debt servicing capacity during the tenor of a project or term finance facility.

Due diligence The process of investigation and discovery that is undertaken prior to entering into a contract to acquire an asset, a business or to undertake a project. For an urban property development, the matters that may be investigated include (a) the history of land ownership and use, (b) site conditions, (c) planning and development approvals and processes, (d) the fate of prior development applications, (f) proposed future infrastructure, and (g) the quantitative and qualitative aspects of population distribution.

EBIT Earnings before (the deduction of) interest and tax.

EBITDA Earnings before (the deduction of) interest, tax, depreciation and amortisation.

EBT Earning before (deduction of) tax.

Economic growth An increase in GDP per capita over time. When growth is negative for two consecutive quarters, an economy is said to be technically in a recessionary phase. However, evidence of an economic downturn are also predicted by movement in a number of leading indicators including a fall in aggregate demand, oversupply, a slow-down in the availability of credit, a fall in business investment, rising unemployment and, property vacancy rates. The term structure of interest rates (differences in rates between short and long-term interest rates) can provide an indicator of future economic conditions – a reduction in long-term (10 year) rates compared with those over shorter maturities (3-5 years) suggests a slowdown in economic activity.

The determinants of economic growth continue to be widely researched. The literature points to a number of common features to the various growth theories in recent years – property rights, human capital development (life expectancy, health, training and education), trade, well developed institutions, an efficient finance sector, innovation and technology (Regan, M. 2008, *Economic Growth Theory*, Research Paper 116, Mirvac School of Sustainable Development, Bond University, Queensland).

Economic infrastructure Assets that facilitate economic activity. The term is used to describe improvements such as roads, bridges and tunnels, airports, railway networks, ports, electricity generation, transmission and distribution, water and sewerage facilities and, other assets incidental to the provision of infrastructure services.

Economic rate of return (ERR). A measure of the total return generated by an enterprise or undertaking within a period measured using net cash receipts and changes in asset capital values divided by the opening market value of assets.

Economic rationalism A generic term that refers to changes in the way government evaluates and costs the provision of public goods. For example, the use of user pays principles for government services and cost benefit measurement of state spending and delivery of services. It is associated with notions of requiring government to pay its way (commercialisation), privatisation and smaller government and is a departure from the welfare state approach to public economics adopted in western countries following World War II.

EIRR Economic Internal Rate of Return. A measure of the total rate of return generated by an investment or an enterprise and which includes net cash receipts and changes in the value of assets.

Elasticity A mathematical measure used to describe the strength of a causal relationship between two variables. For example, it is used to measure changes in demand as a result of a price increase. A large reduction in demand would suggest a large demand elasticity whilst a small decrease in demand would be described as low demand elasticity. Infrastructure services typically have low demand price elasticity – an increase in the price of energy and water will not generally lead to a long-term reduction in demand. The availability of substitutes and competition can contribute to high demand price elasticity for some goods and services.

Embedded option An option that is a fundamental term of a long-term agreement. In long-term incomplete contracts such as build own transfer or PPP agreements, an embedded option may provide a basis for the negotiation of future uncertain events or offer a framework for variation to the agreement.

Embedded technology The current technology that is built into new buildings, plant and equipment and which is transferred automatically when these items are acquired. Embedded technology is more evident in markets with high levels of competition.

Endogenous growth theory An evolving body of theory that explains economic growth in terms of the structural attributes of an economy including investment in human capital (especially education and training) and physical capital (new plant and equipment, productivity), policy measures (preservation of property rights, competition policy that improves efficiency and competitiveness; incentives to encourage inventions) and the production of new technology (research and development, tertiary education). Endogenous growth theory predicts positive externalities and spill-over effects from policies that

encourage a high value-added knowledge economy (EPAC 1994, *Investment for Growth*, Papers presented at an Office of EPAC seminar held in Canberra on 23 November 1993, Background Paper No. 39, AGPS, Canberra). See the alternative **neoclassical growth theory**.

Endogenous risk Risk that can be identified, measured, valued and managed internally. For example, **unsystematic risk**.

ENPV Economic Net Present Value

Entrepreneurial capitalism A form of capitalist economy in which state policy is directed at providing direct and indirect investment and financial assistance and, a creative environment for small businesses and individuals to initiate and develop new businesses and intellectual property (especially know-how, new technologies, design and processing innovation). The important role that technology plays in economic development is recognised in the evolution of neoclassical, endogenous, institutional and new growth theories in the past 30 years.

EOI (Expression of interest). A process designed to attract a large number of potential bidders for projects in which respondents are asked to demonstrate their technical capabilities, experience and ability to arrange finance for the contract. For major projects, a short-list of EOI respondents is invited to submit a tender under a **RfT (RfP)** process.

EPAC Economic Planning Advisory (Committee) Commission

EPS Earnings per share – a measure of the earnings attributable to each ordinary share on issue in a company over a 12 month period.

Equity The proprietor's capital investment in an enterprise or undertaking. Equity capital is generally unsecured, high risk and illiquid if securities in the enterprise are

unlisted. Shares or stock in a corporation listed on a securities exchange.

Equity leases A lease arrangement for land or assets which contains an option for the lessee to acquire the leased property.

EREIT Equity real estate investment trust.

EROE Economic return on equity. The return of an enterprise or undertaking that includes cash and accrued receipts and payments.

ERR Economic rate of return. The rate of return on an investment calculated with cash and accrued receipts and payments.

ESD Ecologically sustainable development.

EV Enterprise value. The market value of an enterprise as a going concern.

$$EV = \text{market capitalisation} + \text{debt \& preference shares} - \text{cash.}$$

Exogenous risk Risks in an undertaking that are outside the control of the managers. For example, **systematic risk**.

Externalities Events that impact an activity or undertaking that are beyond the control of its managers. Externalities may result from the actions of third parties (special interest groups, judicial decisions) governments (new taxes and regulations) and natural events.

The positive and/or negative effects and costs imposed on an economy by public or private action. Infrastructure is said to have positive externalities such as improved productivity, lower private sector costs and greater regional economic output. Examples of negative externalities include congestion, pollution and social dislocation.

The term also describes exogenous shocks to an economy in the form of unexpected or dramatic changes in capital markets, currency exchange

rates, energy prices or foreign political events.

FDI Foreign Direct Investment

Feasibility studies A review of an investment proposal to determine whether or not it meets **hurdle rate** criteria.

Fee simple A freehold or absolute interest in land.

Final consumption expenditure (FCE) Net expenditure on goods and services including compensation to employees, procurement of goods and services, consumption of fixed capital, repairs and maintenance. It excludes expenditure on fixed assets, inventions, land and existing buildings or second-hand assets.

Financial analysis The analysis of a commercial transaction that measures the outcomes, possibilities and implications of a course of action in financial terms.

An investment evaluation technique that is confined to the cash-flow implications of alternative options (Government of Victoria, 2008, *Investment Lifecycle Guidelines*, Department of Treasury and Finance, Melbourne).

Financial economics The study of macroeconomic fiscal and monetary policy. The term is also used to describe studies in asset pricing and capital markets.

Financial close The execution of project financing documentation. The term refers to completion of negotiations and the commencement of construction or performance under the contract.

Financial forecast The evaluation of the future cash flow characteristics of an investment or project often presented in discounted cash flow terms and supported by detailed assumptions about the future operating environment.

Financial risk In major projects, this refers to exogenous risks associated with the financing of the project. Typical financial risks include variability in interest rates, commodity prices and currency exchange rates.

Financial risk refers to (a) the risk that the financiers (debt and equity) will not provide or continue to provide funding to the project (risk of financial uncertainty); (b) the risk that financial parameters will change prior to the project sponsor fully committing to the project, potentially adversely affecting price (financial parameter risk); and (c) the risk that the financial structure is not sufficiently robust to provide fair returns to debt and equity over the life of the project (and hence calls into question the continuing viability of the project)(risk of robustness of financial structure) (Partnerships Victoria 2001, *Risk Allocation and Contractual Issues*, Department of Treasury and Finance, Melbourne, p. 63).

Financial year The statutory annual date for the close-off of business accounts. In Australia, this is 30th June each year and is also the date for lodgement of a tax return for the previous 12 months. Resident businesses may request an alternate financial year to meet the accounting years of parent companies in other jurisdictions. In the United States, the statutory year is the calendar year ending 31st December and in Britain, 31st March.

Finite tenure An interest in real and personal property for a limited term. For example, the lease of land.

Fiscal policy The policy approach that government takes to revenue and expenditures. The main levers of fiscal policy are taxation, government spending and the budget. Fiscal policy can be used to affect aggregate demand and maintain economic stability.

Fiscal sustainability A principle that favours state fiscal self-sufficiency and the avoidance of high level of state

debt and other adverse consequences of economic management that will be passed on to future generations. See also **intergenerational equity**.

Floating rate Prevailing market rate of interest. For commodity prices, prevailing market rates are described as the **spot price**.

Floor price A minimum price. Compensation may be payable by one party to another under a supply contract when the output price falls below an agreed or floor amount. In the freight transport industry, regulators may set a floor price equal to the marginal or incremental cost of providing a service.

In regulation, it is a price equal to the marginal or incremental cost per unit of production.

Fly-in-fly-out A common practice in the resources sector of transporting employees to remote locations for shift work and returning them to their normal place of residence at the end of their shift. Employees are housed in temporary quarters during their shift which avoids the high cost of relocating families and providing the economic and social infrastructure necessary to support a permanent residential population.

FM Facilities management.

Force majeure An intervening event that is not the fault of a party to a contract and which threatens to disrupt, frustrate or terminate the contract. For example, an event that causes loss of the asset or networks serving the asset.

Franchise A contract whereby a party grants a licence (the franchisor) to another (the franchisee) to operate a business, supply goods or services or use intellectual property for a specific period of time and generally under conditions of exclusivity or limited competition. A PPP for the provision of a public good is generally described as a franchise or **concession**.

Free cash flow The net cash available to a business or project after payment of royalties, interest and taxes, and the allocation of funds to depreciation and provisions. It is the liquid balances available for distribution as dividends.

FTSE The term that describes the Financial Times Stock Exchange in London. The FTSE publishes indexes for various groups of listed corporations including the FTSE 100, FTSE 250, FTSE 350 and sub-groups of high and low yielding versions of the FTSE 330.

Full recourse finance A loan agreement whereby the lender holds security over all of the assets of the borrower.

GBE Government Business Enterprise. Also described as a **GTE** or Government trading Enterprise or a **GOE** Government Owned Enterprise.

GCS Gross Capital Stock. The aggregate value of an economy's capital assets which includes residential and non-residential property, plant and equipment, livestock and intellectual property before depreciation and retirements.

GDP Gross Domestic Product. A measure of the aggregate market value of goods and services produced in an economy over a period of time. GDP only includes goods and services produced for final consumption, investment and changes in stocks.

Gateway Review Process A process for the systematic review of a project being procured by government. The agency proposing the project must take it through a series of gateways at which an independent panel monitors progress against rigorous evaluation criteria. There are a number of key gateways during the procurement cycle and whilst these may be different between jurisdictions, they generally involve a business needs assessment, preparation of a business case, procurement options analysis and strategy, investment decision,

readiness for service and post-commissioning review.

Generic risk The risk commonly associated with an enterprise, an asset class or a particular industry sector. For example, draught is a generic risk of the agribusiness sector and the risk of expropriation is a generic risk carried by most private sector investments in public private partnership projects.

GFCE Gross Fixed Capital Expenditure

GFCF Gross Fixed Capital Formation. Government GFCF means expenditure on new fixed assets, additions and replacements; net expenditure on second hand fixed assets, new roadworks and the upgrading of existing roads and excludes repairs and maintenance. GFCF (private) includes expenditure on new and second-hand fixed assets, dwellings, machinery, equipment, motor vehicles, livestock, intangible fixed assets and ownership transfer costs. It includes compensation to employees and other costs in connection with own account capital formation. It excludes expenditure on repairs and maintenance.

GFCF (I) Infrastructure Gross Fixed Capital Formation. Gross fixed capital formation for the communications, utilities, transport, health and community services sectors of the economy

GFS Government finance statistic.

GICS Global Industry Classification System for the classification of various industries and used by organisations such as the ASX to construct sector and other indices

GIS Geographical information system

GNP Gross National Product. GDP plus the balance on external account (i.e., income accrued overseas to residents less domestic income accrued to non-residents).

GOE Government Owned Enterprise

GOS Gross Operating Surplus. The net profit of an enterprise

Governance The body of rules and processes employed by an organisation in the performance of its functions and the exercise of its will. Good governance is characterised by (a) accountability, (b) transparency, (c) good information, (d) effective communications, (e) leadership, (f) training, (g) performance monitoring, and (h) sound management.

Grants Commission See Commonwealth Grants Commission

Greenfield project A project situated at a new site not previously used for a similar purpose. The term is generally used to describe new industrial locations with a low level of supporting infrastructure.

Gross capital stock The replacement value of the economy's stock of tangible and intangible assets. It is the accumulation of past investment flows less retirements. See net capital stock.

GSP Gross State Product. The GDP equivalent for a regional economy.

GST Goods and Services Tax

GTE Government Trading Enterprise

Guarantee Undertakings by a party to meet the obligations or due performance of another. A performance bond provided by a bank to the State on behalf of a contractor for a PPP arrangement is a form of performance guarantee.

Haircut When parties to a contract are required to reduce profit margins or benefits.

Hard FM Routine operational maintenance of buildings, plant and equipment.

Hedge To manage exposure to financial and commodity price risk. Hedging products include interest rate swaps, commodity futures and forward rate agreements for currency exchange exposures.

Horizontal integration The practice of diversifying a business across different industries or activities. In the transport industry, for example, a horizontally diversified enterprise may have interests in ports, rail, and road and air freight. It also refers to enterprises with activities in a number of unrelated industries.

Hurdle rate The target rate of return that a firm requires to invest in a specific project or a class of assets. Hurdle rates are generally calculated using a risk-free rate and a premium designed to compensate for the risks of that undertaking. The hurdle rate of an enterprise is calculated differently for listed, private and portfolio investors:

Listed companies calculate their hurdle rate using a risk-free (or bond) rate plus a premium that compensates for systematic or market risk. However, if the company is a single asset investment vehicle (**SAIV**), the hurdle rate may include a premium that compensates for unsystematic risk.

Private companies generally calculate a hurdle rate by reference to the actual cost of capital and a premium that compensates for unsystematic risk. However, if the company has a spread of investments, it may use a risk-free rate and add a systematic risk premium calculated for listed companies with similar assets and activities. If the company is a SAIV or a vehicle for a joint venture, the hurdle rate or target **ROR** will generally be a combination of the company's **WACC** and a premium that compensates for all of the risks of the undertaking.

Hybrid security A security that possesses the characteristics of both debt and equity such as convertible notes and preference shares.

IC Industry Commission.

IFC International Finance Corporation.

Incomplete contract A contract whereby some aspect of the future is not observable or capable of resolution

at the time the contract was entered into and writing-up the contract to address all future possibilities is too costly, impractical or unachievable (Regan 2004). Incomplete contracts may attempt to resolve uncertainty with embedded options, mediation and mechanisms for the resolution of matters that may arise in the future.

Indemnity A **guarantee** against financial loss. For example, a franchise may provide for the franchisee to indemnify the franchisor against any financial losses incurred in the course of operation of the franchised business activity during the term of the franchise. A policy of insurance also serves as an indemnity against specified financial loss.

Indexed securities (inflation indexed bonds) are an interest bearing security with the interest payment indexed to the Consumer Price Index.

Industrial relations risk Risk of an adverse impact on the cost or timely delivery or operation of a project or undertaking as a result of all forms of industrial disputation including stoppages, strikes, lockouts, work bans, work-to-rules, blockades, picketing, secondary boycotts and go-slow action.

Indirect investment Investment in one or more assets through the agency of an interposed entity. A listed unit trust that holds real estate assets is indirect ownership of real estate assets by the unit holders. The unit holders have a direct investment in the unit trust and an indirect interest in the real estate assets of the trust.

Inflation Currency depreciation. See **CPI**

Information memorandum An informal **prospectus** which contains a description and information about an investment opportunity or venture. However, unlike a prospectus, it is not a registered offer document and cannot be used to raise moneys by public subscription. The memorandum

is generally used to raise debt and private equity capital.

Information ratio A measure of the risk-adjusted return of a security or portfolio calculated by dividing active return (the difference between that of the security and a benchmark index) by the tracking error (the standard deviation of the active return).

Infrastructure The structural frameworks, systems and networks that facilitate economic and social activity (Rutherford 2002). In economic terms, infrastructure generally refers to fixed and durable assets such as plant, equipment, buildings and civil works that provide the productive framework for the economy (Regan 2004). Social infrastructure is defined by reference to its many examples which include public buildings, schools and universities, hospitals, public transport and public amenities. Infrastructure is also described as social overhead capital.

Infrastructure & Utilities Sector is an index of the Australian Stock Exchange that existed between December 1995 and June 2001. The sector included listed companies engaged in infrastructure portfolio investment and single asset or business investment vehicles investing in motorways, infrastructure services, airports, pipelines, energy generation and transmission.

Input specification In project procurement, the scope of works that specifies what the contractor will build (the plant and equipment, furniture and fittings and finishes) and how the contractor will build the works.

Input-output tables A disaggregation of GDP metrics into inter-industry flows of goods and services.

Institutions The rules of the game. In public policy, institutions may be formal (the political, executive and judicial organs of government, a banking sector, the rule of law, property rights and public infrastructure) or informal (culture,

traditions, conventions and codes of behaviour).

Integrated supply chain An association of firms that is responsible for the delivery of a project, good or service. An integrated supply chain will bid for the joint delivery and operation of projects and offers benefits of technical memory, multi-disciplinary management and experienced teamwork.

Intellectual property Designs, inventions, patents, copyright, trade marks, proprietary knowledge, confidential information, know-how and technology protected by law or whose access is limited by agreement.

Interactive tenders A process of dialogue and exchange of information between short-listed bidders designed to improve symmetry of information and inform bidder selection.

Interest cover ratio The ratio of net cash flow before interest to interest expense.

Interface risk See **network risk**.

Intergenerational equity The principle that current government policy should not be exercised if it creates or preserves adverse economic or social consequences for future generations. For example, under-provision of economic and social infrastructures, failure to address acute social and economic problems and large public borrowings scheduled for payment from future state revenues.

Internal rate of return (IRR) The rate which, when used to discount cash flows for a particular investment, reduces the undertaking's net present value (NPV) to zero. An IRR measures the breakeven rate of return for an undertaking indicating the highest interest rate at which the investment does not make a profit. When an IRR exceeds the cost of capital, the investment will generally be profitable.

Investment grade is a credit rating that corresponds to Standard & Poor's

BBB or better. Investment grade suggests an enterprise or security with superior credit qualities and correspondingly, lower cost of debt finance. Securities with a lower credit rating are considered speculative and many institutional investors are required to hold minimum levels of their investments in investment grade securities.

Investment logic map is a simple single-page depiction of the logic that underpins an investment. It provides the core focus for an investment and is modified to reflect any changes to the investment logic throughout its lifecycle (Government of Victoria, 2008, *Investment Lifecycle Guidelines*, Department of Treasury and Finance, Melbourne).

IPFA International Project Finance Association

IPART The Independent Pricing and Regulatory Tribunal (New South Wales, Australia)

IPO (Initial Public Offering) An offer usually contained in a prospectus which invites subscription for securities in a company or trust that is to be listed on a Stock Exchange. An IPO refers to the first listing for quotation of the entity's securities.

IRR Internal rate of return. The rate of return used to discount forecast cash flow at which the future value is equal to zero.

Impact The cost, benefit or risk (either financial or socio-economic) rising from an investment option (Government of Victoria, 2008, *Investment Lifecycle Guidelines*, Department of Treasury and Finance, Melbourne).

Incomplete contract A long-term contract with a number of embedded options that does not actually settle until it reaches maturity. It is also used to describe long-term contracts that cannot contain all of the terms necessary to deal with future events but contain resolution and arbitration

mechanisms. The embedded options and resolution mechanisms may vary the terms or underlying economic nature of these contracts.

Integrated supply chains A supply chain comprising all of the parties responsible for delivering a good or service. An integrated supply chain is responsible for delivering the whole project or stages of a project and often stays together from project to project or for stages of a project. The advantages of integrated supply chains include retained learning, know-how and mutual understanding.

ITAA Income Tax Assessment Acts (*Cwlth.*)

Jurisdiction In a contract, the country of the governing law.

Just in time inventory management A method of production logistics management whereby production inputs and outputs are ordered at short notice and effectively stored in transit to minimise inventory costs.

JV Joint venture An unincorporated common undertaking entered into by several enterprises. A joint venture is not necessarily a partnership for tax purposes and the respective interest of the venturers is accounted for separately.

Keynesian economics A school of economic thought and management that views the national budget as the principal instrument for maintaining full employment. Keynes viewed government as the central player in the national economy and favoured interventions such as deficit spending (to provide economic stimulus) and fiscal policy (to influence aggregate demand and reduce unemployment).

Key performance indicators (KPI) Material contract performance measurement standards.

A measure that has been selected to demonstrate that a benefit expected from an investment has been delivered (Government of Victoria, 2008, *Investment Lifecycle Guidelines*,

Department of Treasury and Finance, Melbourne).

Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing greenhouse gas (GHG) emissions. These amount to an average of five per cent against 1990 levels over the five-year period 2008-2012.

The major distinction between the Protocol and the Convention is that while the Convention encourages industrialised countries to stabilize GHG emissions, the Protocol commits them to do so (Source: United Nations Framework Convention on Climate Change, 2008).

Labour productivity GDP per hour worked.

LCIV Listed Collective Investment Vehicle.

LDO Lease, develop and operate.

Legislative and government policy risk The risk that government will exercise its powers and immunities, including but not limited to the power to legislate and determine policy, in a way which negatively impacts on or disadvantages the project (Partnerships Victoria 2001, *Risk Allocation and Contractual Issues*, Department of Treasury and Finance, Melbourne, p. 89).

Letter of comfort A letter written by an institution that provides support to a transaction or assures a prospective lender in a non-binding informal way. In recent PPP transactions in the United Kingdom, letters of comfort have been issued by the Government to lenders in support of limited recourse financing of major infrastructure projects.

Letter of credit An order from a bank to another authorising payment to a specified limit to the party named in the letter.

Leverage The **debt to equity ratio** of an enterprise or a project.

Leveraged buyout (LBO) The acquisition of an enterprise financed with a high level of debt in the form of junk bonds and convertibles.

Leveraged lease A lease arrangement that is used to finance large plant acquisitions. A party acquires the plant using high levels of debt and leases the plant to the user or lessee. The leveraged lease is a tax effective method of investment because of the deductibility of interest and plant depreciation and is used widely to finance business assets in the aviation and resources industries.

Liberalisation Index An index published by the Heritage Institute that rates national economies for trade liberalisation using criteria that includes fiscal and monetary policy, government intervention in the economy, monetary policy, foreign investment, property rights, trade policy, regulation, banking and finance, wages and prices policy.

Liberalism The political and economic theories that favour a reduced role for government in market economies. Liberalism is a movement to advance individual liberties in the horizon of uncertainty (Dahrendorf, R. 1991, *Liberalism in The World of Economics*, ed. Eatwell, J. Milgate, M. Newman, P., The Macmillan Press, London).

LIBOR The London Interbank Offered Rate. The prevailing rate of interest offered on loans to tier one banks in the London Interbank Market. A benchmark for an international interest rate.

Life cycle The operational life of assets such as civil works, buildings, plant and equipment. Lifecycle may also refer to the economic life of wasting assets such as mines and

quarries or assets operated under finite tenure arrangements such as leasehold interests, licences or franchises.

Life cycle costing (LCC) Also referred to as lifecycle costs and whole life cycle costing (WLCC). The assessment of costs, values and physical condition of a constructed asset over whatever basis this is measured – the term of the contract or lease, economic or investment life, operational or technical serviceability. The matters taken into account when calculating the LCC of an asset include the initial construction price, real depreciation, fixed and variable costs, repairs and maintenance, rehabilitation and refurbishment. This is calculated over the optimal service life of the asset and for a typical commercial building with an effective life of 20 years, the average LCC: cost ratio is around 5:1 in nominal terms. LCC puts greater focus on the quality of an asset's construction and engineering, the use of durable and easily maintained internal and external finishes and technologies designed to reduce utility costs over the life of the investment. It also emphasises the importance of preventative maintenance throughout the asset lifecycle.

Lifecycle cost is the total cost of an item or system over its full life. It includes the cost of development, production, ownership (operation, maintenance, support) and disposal, if applicable (Government of Victoria, 2008, *Investment Lifecycle Guidelines*, Department of Treasury and Finance, Melbourne). See also **Whole-life asset economics**.

Limited recourse debt A form of capital that is secured over the assets being financed without recourse to the borrower(s). The lenders of this form of debt generally limit their security interests to the assets and undertaking being financed together with a right of **subrogation**.

Liquid damages (LDs) A liquid sum stipulated in a contract as a pre-estimate of damages for specific default events. Liquidated damages are common to most building contracts and apply to matters such as late delivery. Liquidated damages are generally secured with a bank guarantee or a bond.

Liquidity accounts A special reserve or stand-by credit facility that is created with new infrastructure projects to meet unexpected short-term liquidity or debt servicing problems. See also **locked box account, cascade payment arrangements and cash traps**.

Listed enterprise A corporation or trust whose securities are traded on a capital market (such as the Australian Securities Exchange)

Locked box account An account in which free cash flow is deposited to be withdrawn only with the consent of financiers and/or other stakeholders.

Logic map A simplistic diagrammatical representation of the rationale for an investment or course of action. The scope of a logic map for a new investment, for example, may include the furnishing of an asset, commissioning, lifecycle operation and strategy for asset disposal at maturity.

Long-term bond A security with a tenor of 10 years or more.

LPT Listed Property Trust

LSR Loan to Security Ratio. The ratio of a loan to the market value of the lender's security.

LVR Loan to Valuation Ratio. See **LSR**.

M3 A measure of money supply that includes currency in circulation and bank deposits of the private non-bank sector.

Macroeconomics That branch of economics concerned with aggregate economic activity at the national level.

MAIV Multi-Asset Investment Vehicle. An enterprise that has investments spread over a number of assets. A portfolio investor.

Market A forum for the exchange of goods and services. A market economy is one in which supply, demand and equilibrium prices determine resource allocation.

Market failure Market failure occurs when the market doesn't provide a good or a service or where the negative social externalities from the provision of a good or service outweigh the economic benefits.

Market risk The risk that the demand for a service will be less than forecast. Also known as patronage forecast.

The risk that demand for a service will vary from the level forecast or the price of the service will vary from that initially projected with the result that the total revenue derived from the project over the holding period varies from initial expectations (Partnerships Victoria 2001, *Risk Allocation and Contractual Issues*, Department of Treasury and Finance, Melbourne).

Marketing risk In major projects, marketing risk generally refers to uncertainties associated with demand and output pricing.

Mark-to-market To make an accounting adjustment that reflects unrealised gains and losses on the book values of assets and investments at the end of a reporting period. Assets are valued at the prevailing market price.

Matching In long-term contracts, the practice of offsetting a risk on the expense side of an undertaking (for example, interest rates or inflation) with a similar position on the revenue side. Matching is a risk management practice designed to mitigate escalations in outgoings with commensurate escalations in income. For example, the indexation of electricity prices to the cost of gas consumed in the generation process.

For a lender, it may take the form of balance sheet matching long-dated liabilities with long-dated assets.

MBO (management buyout) The purchase of a business (or an asset) by the managers of the business.

MBS Mortgage backed security. The securitisation of portfolio mortgage debt.

Merit goods A form of public goods which government determines is necessary in the public interest and includes interventions in areas such as education, public health and occupational health and safety.

Mezzanine capital The capital of an enterprise or an undertaking that possesses the characteristics of both equity and debt capital. For example, preference shares, subordinated debt securities and convertible notes.

MFP Multi-factor productivity that includes both labour and capital productivity components.

Microeconomics That branch of economics concerned with the analysis of behaviour at the individual and firm level.

MGIF, MGIT Macquarie Global Infrastructure Trust

MIG Macquarie Infrastructure Group

Modigliani and Miller The originators of a theory of finance that contends that in certain circumstances (which exclude the effects of taxation amongst others), the cost of capital of a given investment is determined by reference to the risk of the investment and not its method of capitalisation (Miller, M. Modigliani, F. 1961, *Dividend policy, growth and the valuation of shares*, Journal of Business, October).

Monetary policy In Australia, monetary policy (interest and exchange rates and money supply) are independently managed by the **Reserve Bank of Australia**. Interest rate settings affect aggregate demand, consumer spending and investment.

Exchange rates directly affect capital flows.

Money market describes that branch of the capital market used to trade all forms of short-term financial securities.

Monte Carlo analysis A technique that uses various random probability (or stochastic) distributions as inputs to produce the probability distribution of a single output. For example, when evaluating risks in the public sector comparator, Monte Carlo simulation would use the probability distribution of the various individual risks as inputs to produce a global probability distribution of total project risk, by forming a multivariable relationship between the project risk and simultaneously solving for these different risk relationships (Appendix F, Partnerships Victoria 2001, Public Sector Comparator, Technical Note, Department of Treasury and Finance, Melbourne, p. 103).

Moral hazard A principle that the party with least to lose will have a stronger appetite for risk than one who has more to lose. Moral hazard is frequently applied to insurance contracts and assumes that persons with high personal or property insurance cover will engage in riskier behaviour than a person who is under-insured. It follows that insurance may, in fact, increase the probability of a future risk event.

MRA Maintenance reserve account created at initial capitalisation or from revenue and designed to ensure sufficient funds to meet asset maintenance costs during periods of low cash flows.

Multi-criteria analysis A term that refers to analytical tools that measure the impact of new projects against specific criteria such as economic efficiency, utility value or decision analysis and balance sheet outcomes (who gains and who loses).

Multipliers The number of times that the income and employment of an

economy increases as a result of particular economic activity.

NBER National Bureau of Economic Research (US)

NBFI Non-Bank Financial Institution

NCP National competition policy (Australia). A group of national reforms implemented in the 1990s that were designed to increase competition and raise the productivity performance and international competitiveness. The reforms includes (1) extension of the anti-competitive conduct provisions of the Trade Practices Act (*C'wealth*) to unincorporated enterprises and government businesses, (2) reform of public monopolies and other state businesses with the separation of contestable elements and introduction of competitive neutrality principles, (3) the creation of independent authorities to regulate the pricing of monopoly service providers, (4) the introduction of regulatory impact assessments and (5) specific reforms in the electricity, gas, road transport and water industries.

In the decade following the introduction of reforms, NCP delivered substantial benefits to the Australian economy in the form of improved productivity, reduced infrastructure services prices, stimulated innovation and choice and led to improved resource allocation in both the public and private sectors (Productivity Commission 2005, *Review of National Competition Policy Reforms*, Report number 33, Canberra).

NCS Net capital stock. **Gross capital stock** less depreciation and retirements.

NCS(I) Infrastructure Net Capital Stock. The value of NCS for the communications, utilities, transport, health and community services sectors of the economy.

Neoclassical (exogenous) growth theory The economy will move toward a steady state and the rate of growth will depend on technical progress.

Policy measures such as tax cuts or investment subsidies do not affect the rate of growth.

Net capital stock (NCS) The accumulated replacement value of a basket of tangible and intangible assets less retirements and depreciation. NCS represents the NPV of future capital services to be provided by these assets (Regan, M. 2004, *Infrastructure: The New asset Class in Australia*, Benetti Publishing, Melbourne).

Net present value (NPV) The measurement of present value of future (discounted) cash flows. NPV reflects the time value of money.

Network risk The risks associated with proximity, access and pricing of the networks needed to support a new production facility and its output. For example, the procurement of a new energy generator may require access to gas pipelines or coal supplies and associated freight transport services, access to the national grid for the transmission of output, and distribution arrangements through regional energy retailers. Network risk also includes network serviceability matters such as the capacity and serviceability of connecting networks, regulatory interventions and access pricing.

NGO Non-government organisation such as Greenpeace or Amnesty International.

NTA Net tangible assets – an indicator of an enterprise's asset value per share in the event of liquidation and after repayment of creditors.

NGFI Non-Government Financial Institution

NGO Non-Government Organisation

Nominal values The value used in cash flow forecasting that includes an inflation component.

Non-market or public failure When the public sector fails to deliver public goods or community services or the internal costs of provision significantly

outweigh the benefits in economic and social terms.

Non-recourse finance A form of unsecured loan – the lender has no recourse to the assets of the borrower.

NOPAT Net operating profit after taxation.

NPV Net present value – the discounting of future cash flows. Discount rates reflect the time value of money.

NTA Net Tangible Asset.

O&M agreement An operations and management agreement that provides for the division of responsibilities and the rights of parties with respect to the operational phase of a major project.

Obsolescence The point at which a building or an asset no longer performs at the standard for which it was originally designed or is superseded by more efficient design or technology.

OECD Organisation for Economic Co-Operation and Development

Off-balance sheet An obligation that does not appear as a liability in a balance sheet.

Off take agreement or contract A long-term contract for the sale of future production or output. A PPP contract may contain a provision for the State to pay a specified amount for the availability of a public good or the provision of a service to, or on behalf of, government.

OGC Office of Government Commerce (UK)

Oligarchic capitalism A form of state-guided capitalism in which the state exercises economic policy in favour of special interest groups. This approach is widely employed in developing nations throughout the world including former Comecon (East European) countries, the Asia Pacific and Africa.

A nominally capitalist economic system with universal property rights in which state policy is designed

predominantly to promote the interests of a small proportion of the population such as landed, aristocratic or wealthy families, individuals or a merchant class.

Operating risk Risks associated with the operational aspects of a long-term infrastructure project such as service delivery to the specified standard, compliance with key performance indicators and achievement of lifecycle commercial objectives.

Operating risk is the risk that the process for delivering services to specification (including the inputs used as part of that process) will be affected in a way which prevents a contractor from delivering the contracted services according to the agreed specifications and/or within the projected costs (Partnerships Victoria 2001, *Risk Allocation and Contractual Issues*, Department of Treasury and Finance, Melbourne, p. 68).

Operator The facility manager.

Opportunity cost The cost of an undertaking in terms of the available alternatives.

Optimism bias The systemic practice of underestimating costs or overestimating benefits of an undertaking or investment. The drivers of optimism bias include (a) failure to develop a sound business case, (b) segregation of the design, construct and asset management components of a project, (b) adversarial contracting methods, (c) forecasting error, (d) poor liaison with key stakeholders at an early stage, (e) lack of rigour in the procurement process, and (f) poor project and risk management practices.

The demonstrated systematic tendency for appraisers to be over-optimistic about key project parameters, including capital costs, operating costs, works duration and benefits delivery (Government of Victoria, 2008, *Investment Lifecycle Guidelines*, Department of Treasury and Finance, Melbourne).

Option A security that gives its holder the right, but not the obligation, to buy or sell an asset at a specified price within a certain period of time. An option may be embedded which grants to one or more parties specific electives under a contract or it may be real in which case it refers to all of the commercial possibilities and configurations available to a party under a contract that flow from both the contract and changes in the operating environment.

Option analysis The evaluation of the financial and the non-financial consequences of different courses of action.

A process in which a range of options (both asset and non-asset) are evaluated. The cost cost-effective options are then selected for more detailed evaluation through a business case (Government of Victoria, 2008, *Investment Lifecycle Guidelines*, Department of Treasury and Finance, Melbourne).

Output Specification A description of the services that a particular procurement is designed to provide. For example, if a government department proposes to construct a new school project, it may put out for tender an output or an input specification. An output specification will specify the number of students and teachers to be accommodated, the mix of activities and the additional facilities and services that will be available to students including after-school child care. The bidders for output specified projects will submit a design and construct proposal.

For procurement contracts that require bidders to operate or maintain the building for a term of 10 or 20 years, the bidder assumes the risk of lifecycle costing for repairs, maintenance and operating expenses such as energy and water consumption. In these circumstances, the bidders have an incentive to specify durable finishes and design buildings that are low-maintenance and energy efficient.

An output specification is to be compared with an input specification which separates the design and construction phases of the project. The organisation issuing the tender will prepare a detailed design specification that includes the number and dimensions of rooms, the heating and cooling systems, internal and external finishes, floor coverings and the type of water heaters to be installed in the staff lunch room. Bidders will submit proposals to construct to the input specification. Input specifications are used where bidders are only providing construction services. Design and operational risk including the suitability of the building for its intended purpose rests with the owner of the property and their design consultants.

The output specification sets out the range of services that government is seeking to procure and the performance levels required for each of those services (Partnerships Victoria 2001, *Practitioners' Guide*, Guidance Material, Department of Treasury and Finance, Government of Victoria, Melbourne, p 152).

Outsourcing Contracts for the provision of assets and/or services. Outsourcing may be for short and long-term contracts with the latter frequently requiring significant capital expenditures by the contractor. For example, contracts for local government refuse collection and waste management will require expenditure on a fleet of vehicles, waste management plant and recycling equipment and technologies.

Outsourcing contracts may take the form of **BOT** arrangements under which the contractor meets the cost of furnishing capital equipment and assumes responsibility for lifecycle costing and operational risks. The contractor is only paid for services provided to the standard specified under the contract.

PAC Pacific Airports Corporation Limited

Park and ride Facilities at transport nodes usually close to the city which permit motor vehicle commuters to complete the remainder of their trip to towns and cities in public transport.

Partnering A structured management approach designed to promote collaborative working relationships between parties to a contract. The objective is to align and unite all the parties with a shared goal of completing the scope of the work in a cost-effective and mutually beneficial manner. See **relationship contracts**.

Partnership An unincorporated association of individuals to undertake a business or professional practice. The partnership business structure can be distinguished from other forms of unincorporated association in that a partner may contractually bind other members of the partnership, there is joint liability for the debts of the partnership and fiduciary duties attach to the partners in their dealings with each other.

Partnerships Victoria The public private partnership program conducted by the Government of Victoria, Australia. The PV program provides the basis for most other Australian PPP and PFP programs and is widely regarded as world's best practice.

Passive investor An investor unwilling to participate in the management of an undertaking.

Patronage Market demand for a business or infrastructure service. Patronage risk is the risk that demand will meet forecasts.

PC Productivity Commission

PCA Property Council of Australia

PCOA Parliament of the Commonwealth of Australia

PE Price Earnings (Ratio or Multiple) – the number of times a listed enterprise's share price covers its earnings per share (**EPS**).

Performance bond A surety or guarantee that may be called on by

the contractor in the event that a party providing performance under a contract fails to do so. Performance bonds may take the form of a bank guarantee, an insurance bond or security to the value of the contract to be performed.

Permanent way Refers to railway track, sleepers, ballast and other railway infrastructure that is affixed to land.

PFI Private Finance Initiative. A United Kingdom Government program for procurement of assets and services that uses public private partnerships or PPPs.

PFP Privately Financed Project. The term used to describe public private partnerships in the State of New South Wales, Australia.

PI Professional indemnity (insurance)

PIPO Privatisation Initial Public Offering

PITF The Private Infrastructure Task Force set up in 1995 by the Australian Government through the Economic Planning Advisory Commission to report on private sector involvement in the funding, management and control of public infrastructure.

PITF-GFCF A value of Gross Fixed Capital Formation using methodology used by the Private Infrastructure Task Force.

PITF-NCS A value for Net Capital Stock used by the Private Infrastructure Task Force in 1995 to estimate Australia's cumulative investment in infrastructure. The method that uses data for the public sector and the ANZSIC classifications for the utilities, transport and storage and community services industries. In 1995, the value was approximately 35% of the nation's net capital stock.

Political risk Generally refers to the responsibility of government to the electorate for public failure. The term is also used to describe risks associated with government actions in

international infrastructure investment such as expropriation or discriminatory legislation.

PPA Power purchase agreement. A long-term contract entered into between say, a company supplying natural gas and another company generating electricity. Contracts between the generation company and its customers are referred to as **off-take agreements**.

PPP Public Private Partnership. A method of public procurement that employs a combination of private sector capital and management to deliver services to, or on behalf of, the state. PPPs may take the form of outsourcing services to the private sector and asset or service franchises. In Canada and the United States, these arrangements are termed 3Ps, in New South Wales, Privately Financed Projects (PFPs) and in the United Kingdom, as the Private Finance Initiative (PFI).

PRAM A term for project risk analysis and management.

Preference shares A special class of shares in a company that possess a priority to the payment of a predetermined dividend. Generally, these shares do not carry voting rights and may be redeemed by the company. They are widely used to structure mezzanine or quasi-equity capital.

Preferred bidder is a bidder selected to develop its proposal during the negotiation period in sufficient detail to enable the execution of the final contract.

The bidder selected to proceed with further and final negotiations. A procurement framework may require the selection of one or two preferred bidders. The latter arrangement is designed to maintain competitive tension and entails parallel negotiations and possibly a best and final offer (**BAFO**) process before the final bidder is announced at **financial close**.

Procurement The practice of purchasing goods and services.

Private equity The term refers to non-institutional capital raising that occurs away from capital markets. Private equity investors.

Private placement The pre-arranged sale of financial securities to investors.

Privatisation The deliberate sale by a government of state-owned business units and public assets (Megginson, W. L. 2005, *The Financial Economics of Privatisation*, Oxford University Press, Oxford).

Probability The likelihood of an event or occurrence.

Probability analysis The testing of financial forecasts using deterministic and stochastic probability techniques to estimate the likelihood of certain outcomes. See **Monte Carlo analysis**.

Procurement The acquisition of an asset or service.

Productivity Output measured in terms of inputs of labour and capital over time.

Project alliances A form of procurement where the client collaborates with a contractor or service provider to undertake a project. It is an agreement in which both parties agree on a target price for the project (with sharing of project risks, cost overruns and savings) and manage the project through a joint project delivery structure. This form of contracting is producing better delivery outcomes, less disputation and lower procurement cost than adversarial forms of traditional contracting.

Project finance A form of finance used to capitalise long-term infrastructure and resources projects. Project finance is principally syndicated limited recourse debt with the repayment matched to the cash flow of the undertaking.

Project scope is a document that describes the services being procured

and the performance standards required of them.

Prospectus A document issued by a public corporation inviting applications for the purchase of securities. A prospectus must comply with comprehensive information and disclosure requirements and is registered with the Australian Securities and Investments Commission.

PSBR The public sector borrowing requirement is the difference between public sector outlays and receipts and is generally funded from borrowings. It is the indicator used to set aggregate borrowing limits agreed by the Council of Australian Governments for the three levels of government in Australia.

Public choice theory An explanation of policy making in the public sector by analysis of the nature of policy selection (Rutherford, D. 2002, *Routledge Dictionary of Economics*, 2nd edn., Routledge, London). Public choice theory examines the motivations and actions of institutions, politicians and the bureaucracy in determining the policies and actions that affect asset allocation and consumers in the economy.

Public failure A failure by government or its agencies to (a) provide a public good or service, (b) the unintended adverse outcome of government intervention, (c) when a government policy or programme exceeds its anticipated costs or falls short of achieving its objectives. The causes of public failure are similar to those for business failure and may include optimism bias, poor liaison between the executive and legislature, poor planning, inefficiency or incompetence, lack of skilled personnel or poor judgement.

Recent research uses the term more broadly to describe all forms of policy and management failure in the public sector (Tullock, G. Seldon, A. Brady, G.L. 2002, *Government Failure*, A

Primer in Public Choice, Cato Institute, Washington; Winston, C. 2006, *Government Failure versus Market Failure*, AEI-Brookings Joint Centre for Regulatory Studies, Washington; Wolf, C. 1993, *Markets or Governments, Choosing between Imperfect Alternatives*, 2nd. Edn. The MIT Press, Cambridge, MA).

Public good A good or service made available for the community at large and funded from government revenues. The consumption of public goods by one individual does not diminish the consumption by others in the community (i.e., they are non-rival) and public goods are available to all sections of the community (i.e. they are non-excludable). Examples include street lighting, public parks and roads. A quasi-public good is one with elements of exclusion generally in the form of user fees such as a tollway.

Public interest This term broadly describes the welfare of the general public. In Partnerships Victoria projects, the public interest is tested against criteria that include transactional effectiveness (does the transaction meet government criteria?), accountability and transparency (is the community adequately informed?); how the transaction affects individuals and communities (are those affected able to contribute to the planning stages and are rights protected); social equity (can disadvantaged groups effectively use the service being provided?); public access and security (public health and safety) and privacy (adequate protection of users' rights of privacy) (Partnerships Victoria 2001, Practitioners' Guide, Department of Treasury and Finance, Melbourne, June).

Public private partnership See PPP.

Public sector benchmark A risk-weighted model of traditional procurement used to evaluate private proposals in a PPP, outsourcing or build own operate transfer contract. See Public sector comparator.

Public sector comparator (PSC) A risk weighted model of traditional public sector procurement. Partnerships Victoria guidelines describe the function of the PSC to “estimate the hypothetical risk-adjusted cost if a project were to be financed, owned and implemented by government. The PSC is developed in accordance with the required output specification, the proposed risk allocation reflected in the contract released with the Project Brief, and is based on the most efficient form and means of government delivery” (Partnerships Victoria 2001, Public Sector Comparator, Technical Note, Department of Treasury and Finance, Melbourne, p. 6).

A public sector comparator is an estimate of what the project would cost if traditional procurement methods were used but still meeting the performance standards expected from the private sector deal over the life of the contract. The PSC is normally used to determine whether private finance offers better value for money than traditional procurement (National Audit Office 2003, *PFI: The New Headquarters for the Home Office*, Report by the Comptroller and Auditor General, HC 954 Session 2002-2003, 15 July, p. 30).

Put option The grantee of the option has the right but not the obligation to require the grantor to sell property at an agreed price at a particular point in time.

PV Present Value. The present value of future discounted cash flows

PV See Partnerships Victoria

QCA Queensland Competition Authority

Qualitative assessment Evaluation of the *outcomes* or social effects of an undertaking or activity. For example, the improvements in educational standards, improved community health or recidivism following investment in schools, hospitals and corrective services institutions, respectively.

Quantitative assessment Evaluation of readily measurable *outputs* of an undertaking or activity. For example, student enrolments, the volume of surgical procedures or the behaviour of inmates following investment in schools, hospitals and corrective services institutions, respectively.

Quasi-equity Mezzanine finance that typically features the characteristics of both debt and equity. Examples include convertible notes, preference shares and securities that have the form of debt but the characteristics of equity capital such as shareholder loans.

Quasi-public good A public good that may be partly excludable. For example, a tollway, any fee-based government service and public transport. Public goods and services provided by the private sector on a commercial basis are generally referred to as quasi-public goods.

Ramp up The period following commissioning of a project when revenue grows in response to increased patronage. Patronage growth rates are typically greatest in the first few years of a project before adopting a lower and stabilised long-run growth rate which is referred to as the project’s revenue maturity.

Ratings watch A credit agency monitoring developments which may materially affect the credit rating of an enterprise or undertaking.

Real interest rate The prevailing rate of interest minus anticipated inflation.

Real options Opportunities to for managers of projects, enterprises and investments to exercise judgement, discretion and operational flexibility in conditions of uncertainty. Real option theory is used to assist management with resource allocation and project appraisal decision-making.

Real option theory is an economic principle that presumes decision-making is sequential and that decision-makers may benefit from choosing

options that may appear sub-optimal today but which increase flexibility at later times, leading to better decision-making when more is known about the project (H.M. Treasury 2003).

Reasonable Regulation refers to regulatory frameworks for long-term contracts that are designed to progressively penalise contractors for non-compliance. Typically, such arrangements provide for “light handed” regulation and “cure periods” to remedy minor breaches and escalate to financial penalties, alternate dispute resolution mechanisms and termination when the breach threatens the delivery of services.

These contracts may feature cumulative point systems for minor default events which may lapse or be redeemed by performances in excess of requirements. Reasonable regulation is designed to provide a mix of incentives and penalties designed to preserve the contract and maintain reasonable principal-contractor relations during the life of the contract.

Reference tariff An indicative price for the provision of generic services for the purpose of facilitating access agreements to state infrastructure assets such as a railway network or a port.

Refinancing The renewal, retirement or replacement of a debt facility at maturity.

Regulation Rules and enforcement mechanisms designed by government as interventions in the economy or the operation of markets. Examples include (a) licensing of market participants (limiting producers and creating barriers to entry), (b) imposition of output quotas or standards (to control output), (c) price controls, (d) compulsory acquisition (regulation of supply and prices) and, (e) import and export restrictions (to limit international trade).

Regulatory capture describes circumstances where an industry

regulator is strongly influenced by the firm or firms that are being regulated. This can occur in monopoly market conditions where regulatory and enterprise staff work closely on a day to day basis or the organisations enter into formal or informal regulatory or reporting arrangements.

REIC Real Estate Investment Company

REIT Real Estate Investment Trust

Relationship contract is a contract for the procurement of assets that adopt a non-adversarial and collaborative approach to (a) the procurement price, (b) the sharing of innovations, risks and rewards and, (c) the resolution of problems and disputes during the life of the contract.

Rent-seeking is the outlay of resources by an individual or special interest group designed to secure favours including financial rewards from government.

Reserve account A fund that is reserved for a particular purpose such as meeting future interest payments on a project loan in the event that the enterprise will not have sufficient net cash flow at a point in time to do so. In project finance, credit rating agencies may require the creation of reserve accounts to provide a buffer against default that is a consequence of interruptions to cash flow, unexpected capital expenditures or adverse movements in commodity prices or financing costs. Reserve accounts may be managed by the financiers to the project.

Reserve Bank of Australia A state instrumentality set up to independently manage monetary policy and the printing of money.

Residual value See Residual value insurance (RVI)

Return The gross return from investment over a period of time and includes both yield and capital growth. Also known as **Total Return**.

Revenue Cash receipts and inflows of a non-cash kind that possess economic value or produce future economic benefits.

Revenue bonds are bonds issued by the sponsors of a project, state agencies and corporations and provide for periodic payment of interest and repayment of capital from project revenues.

RfT Request for tender. RfP Request for proposal. An invitation to submit a formal tender for a supply or service contract.

Ring fencing The quarantining of components of a supply chain or a business for administrative or regulatory purposes. For example, the unbundling of the generating, transmission and distribution components of the Australian electricity industry effectively “ring fenced” electricity distribution as an independent market.

Risk An occurrence of a future event that may produce an outcome different to what was anticipated. For example, the likelihood of adverse weather delaying construction or adverse interest rate movements affecting construction or ownership costs. The probability of a risk event can generally be ascertained using statistical and actuarial estimation methods. Risk is distinguished from uncertainty which is the occurrence of an unexpected event such as wars, civil commotion and natural disasters where it is not possible to undertake reasonable probability estimation.

Risk may be endogenous and under the control and management of the party assuming the risk such as “due diligence” investigations, appropriate technical skills and management standards and the use of tried and proven technologies or construction methods.

Risk = cost of a risk event x the probability + provision for costs of administration.

Risk may also be exogenous and outside the control of the risk-taker which includes adverse movements in market rates of interest or currency exchange rates. The consequences of an adverse risk event can be managed with mitigation techniques that reduce the probability of an occurrence of a risk event and risk management methods which are designed to minimise the impact of an event if it occurs. In the case of interest rate risk, the risk-taker may mitigate the risk by entering into an interest rate hedging arrangement and manage the risk by exercising judgement about the selection of the interest rate exposure such as the floor and cap prices and the proportion of the exposure that is held in fixed and floating debt.

Risk allocation The systematic allocation of risk to a counter-party. Risk allocation is central to the achievement of value for money in most forms of project procurement especially public private partnership arrangements. Risk transfer is optimal when transferred to counter-parties with greater capacity to manage that risk at the lowest price. Risk allocation is sub-optimal when the risk premium charged by the counter-party exceeds the cost that would be incurred if the assignor retained the risk.

Risk appetite The extent to which a party is willing to accept risk.

Risk free rate A value used in finance to measure the cost of (debt) capital that has least risk. A proxy for the risk-free rate is usually a state bond.

Risk management A process of (a) identifying risk and risk events, (b) estimating the probability and financial impact of a risk occurring, and (c) preparing a plan to deal with risks and threats in the event that they materialise (APM 2004, *Project Risk Analysis and Management Guide*, 2nd edn., APM Publishing, High Wycombe).

A process for the identification, assessment, allocation, mitigation and

monitoring of risk. The object of risk management is to reduce the variability and extent of the impact of a risk event (Contract Management Guide 2003, Partnerships Victoria Guidance Material, Government of Victoria, Department of Treasury and Finance, Melbourne).

Risk matrix A tool used in project risk analysis that helps the value judgements necessary to calculate risk-weighted project estimates. A typical matrix employs two main values, a scale to quantify the cost of a risk event and a scale to quantify the probability of that risk occurring.

A method of presenting all possible significant risks likely to be encountered in a project, the magnitude and likelihood of the risks occurring, their areas of impact, the allocation of risk between parties and the risk mitigation techniques to be employed.

Risk mitigation Any action that can be taken to reduce the likelihood of a risk materialising or the consequences if the risk does materialise. Pro-active risk responses.

Risk premium That component of the required rate of return that compensates an investor for the risk inherent in that investment. An investor usually adds a risk premium to the actual cost of capital to identify a target return or hurdle rate from an undertaking.

Risk: reward relationship The correlation between risk and return reflected in the pricing of public and private capital markets. Low risk assets such as government bonds offer a low return and higher risk listed equities attract a market risk premium.

Risk sharing agreements (RSA) provide for transactional risk elements to be allocated between parties. RSAs are used in **relationship contracts**.

ROA Return on assets. The return on aggregate investment or asset value.

ROE Return on Equity. Total return after payment of interest on debt expressed as a percentage of the enterprise's equity capital.

ROI Return on investment. Total return expressed as a percentage of total enterprise capital (i.e., equity and debt).

Rolling stock A vehicle for the carriage of passengers or freight on a railway system.

ROR Rate of Return. Used interchangeably with ROI.

RPI-X U.K. Retail Price Index based price inflator that excludes mortgage interest.

RVI Residual value insurance. A policy of insurance that provides a floor or minimum value for a particular asset or enterprise at a future point in time.

SAIV Single Asset Investment Vehicle

SAPCO Single asset property (investment) vehicle.

SCNPMGTE Steering Committee on National Performance Monitoring of Government Trading Enterprises

SCRCSPP Steering Committee for the Review of Commonwealth State Service Provision

Scenario analysis A procedure for providing the decision-maker with information about the effect of risks and uncertainties on an investment. In a scenario analysis, a set of critical parameters and assumptions that define a particular scenario are identified and varied to reflect a best case and a worst case scenario (Government of Victoria, 2008, *Investment Lifecycle Guidelines*, Department of Treasury and Finance, Melbourne).

SDM See **supported debt model**.

Secured creditor A creditor that holds security over the assets of the debtor.

Securitisation The conversion of a direct interest in an asset to a marketable security. For example, an investor owning a portfolio of

commercial office buildings may parcel, credit wrap and then sell the stream of future cash receipts to investors with an appetite for commercial property risk.. In infrastructure contracts and PPPs, a future income stream especially if it is in the form of government payments may be securitised to provide capital to finance the undertaking. In the European Community, Irish lender DEBFA Bank has successfully securitised a tranche of PPP receivables to provide new investment capital.

Security A financial instrument issued by a company, trust or other entity and includes bonds issued by a government.

Senior debt Debt that holds the first ranking security interest such as a first mortgage or a first charge over the assets and interests of an enterprise.

Sensitivity analysis The testing of a financial forecast to determine robustness to changes in one or more underlying assumptions.

Service life The period of time than an asset is expected to be operational at the standard for which it was designed.

Shadow banking Refers to the quasi-banking system of registered but lightly-regulated deposit-taking and lending institutions such as building societies, cooperatives and credit unions. These organisations are also referred to as non-bank financial institutions (NBFIs).

Shadow toll A payment by government on behalf of users of a tolled service facility.

Shareholder agreement An agreement between members of a consortium **SPV** engaged in a long-term infrastructure or resources venture that deals with contractual, financial and organisational aspects of their arrangement.

Sharpe ratio A measure of the risk-adjusted return of a security or

portfolio. It is calculated by dividing the security's excess return over the risk-free rate by the standard deviation of the security's returns. The greater the number, the higher the portfolio's risk-adjusted return.

Short selling The sale of borrowed securities in the expectation of continued fall in prices and reacquisition of the securities at lower cost.

Short-termism A distortion in the pattern of investment or operating performance of enterprises or an economy that favours current consumption and short pay-back periods over savings and long-term investment horizons which may be optimal. The distortions may be a result of state tax policies, a high-inflation environment or a consequence of fiscal policy or frequent change in government (Economic Planning Advisory Commission 1995, *Short-termism in Australian Investment*, Proceedings of an EPAC workshop held in Canberra on 10 November 1994, Paper No. 6, AGPS, Canberra).

Sinking fund A fund that is created by making periodic payments such as over time with a view to accumulating sufficient capital to meet future liabilities or asset remediation. In PPP contracts, a sinking fund may be created to provide security against lifecycle maintenance obligations, asset deterioration, plant replacement or new capital works. See **MRA**, **DSRA**.

Site risk Risk associated with a construction or development site and includes matters such as site conditions (exposure to flooding, pre-existing contamination and liability for cleaning-up), the condition of existing buildings, tenure (acquisition costs, title defects, compliance with approval conditions), approvals (planning, development, heritage and native title), and suitability of the site for the intended purpose.

Site risk is the risk that the project land will be unavailable or unable to be used at the required time, in the manner or at the cost anticipated, or that the site will generate unanticipated liabilities, with the result that the contracted service delivery and/or projected revenues are adversely affected (Partnerships Victoria 2001, *Risk Allocation and Contractual Issues*, Department of Treasury and Finance, Melbourne, p. 41).

Social infrastructure The infrastructure that provides social services to the community and includes all types of educational facilities, public buildings, hospitals, emergency services and the human capital that delivers public services.

Social time preference The price society will require for deferment of immediate consumption. The real bond rate is frequently used as a proxy for social time preference rate and is used to discount state investments.

Soft costs The expenditures associated with investments in the built environment that are preliminary in nature and precede "hard" construction expenditures. Examples include costs associated with the negotiation process, planning and development approvals, raising capital, preparing applications and reports, legal and other professional advice, environmental impact studies and management plans.

Soft FM Services connected with the operational phase of a project such as cleaning, waste management, parking, security and catering.

Sovereign fund An investment enterprise structured and fully or partly financed by the state. For example, Temasek in Singapore and The Future Fund in Australia.

Sovereign risk Risks and uncertainty attaching to future decisions, policies or conduct of the state. It includes the risk of government legislating to change the terms of existing contracts,

changes in taxation law and regulatory interventions. Sovereign credit ratings are country-specific assessments of national credit risk.

Sponsor The party responsible for undertaking a project. The sponsor may be a single investor or a consortium and is generally responsible for running the bid and developing the project.

Sponsor risk The risk that the sponsor (or its contractors and sub-contractors) manner or at the cost anticipated, or that the site will generate unanticipated liabilities, with the result that the contracted service delivery and/or projected revenues are adversely affected (Partnerships Victoria 2001, *Risk Allocation and Contractual Issues*, Department of Treasury and Finance, Melbourne).

Spot price The prevailing market price at a point in time.

Spread The difference between a lenders' cost of capital and the rate charged to borrowers. The term also describes risk premiums applied to financial securities.

SPV Special purpose vehicle. A term used to describe a legal entity created solely to deliver and operate a project.

Stakeholder A party to an economic or social transaction. An individual or group with an interest in, or who may be affected by, a decision, contract, undertaking or event.

Stapled security A security with two or more inseparable coupons which evidence interests in an enterprise or asset. A stapled security may take the form of an ordinary share in a company and a unit in a unit trust where both entities share common ownership, or a debt and an equity security in the same entity.

State-guided capitalism A capitalist economy in which investment, resource allocation and the commercial strategies of firms are heavily influenced by the state. In these economies, the state may also

account for relatively high levels of consumption expenditure, there is a high incidence of state-owned enterprises especially banks, sovereign funds control significant stock in private corporations and, there are high levels of state provided infrastructure. Many countries possess elements of state-guided capitalism although this model is normally associated with Singapore, South Korea and, to a lesser extent, India.

An economy in which the state and not private investors, decide which industries and which firms should grow (Baumol, W.J. Litan, R.E. Schramm, C.J. 2007, *Good Capitalism, Bad Capitalism and the Economics of Growth and Prosperity*, Yale University Press, New Haven).

Statistical dependence An observed correlation between values in a probabilistic model that suggests a causal connection between them.

Steering committee A group of persons that provide strategic management of a project or undertaking.

Step-in rights A right under a contract that permits the holder, in certain circumstances, to intervene and assume the rights, duties and obligations of another party to the contract. Step-in right are held by lenders under project finance arrangements and permit continued service provision under the contract following borrower default.

Stochastic value A value determined by the random distribution of possibilities.

Structured finance The term broadly describes finance and equity leases and other specialised types of short-term asset finance.

Sub-contractor A party providing goods and/or services to the principal contractor.

Subordinated debt is debt finance with priority (in the event of a winding-up) that ranks behind senior debt

providers. For example, a second mortgage loan. Subordinated debt may also be referred to as junior debt.

Subrogation A right vested in A to step into the legal shoes of B in the event of a breach of contract or default under a finance facility. The right gives A power to act with the authority and powers that A formerly exercised. In project finance, a lender may hold such a right which comes into effect in the event of default.

Sub-sovereign risk The risk of a government owned enterprise or public authority.

Sunk costs The non-recoverable expenditures incurred in arranging, delivering and commissioning a project. These costs have no value and form part of the developer or contractor's project overheads. For example, site set-up, enterprise formation and bid costs.

Supply The components that make up the productive capacity of an economy. The inputs to supply include (a) capital (investment and net growth in capital stocks, capital productivity and capital deepening), (b) labour (population growth, participation rate, education levels), (c) infrastructure, (d) technology (productivity gains, innovation and management efficiency, research and development activity), (e) policy settings (fiscal and monetary policy), and (e) availability of land (Regan, M. 2007, *Infrastructure Economics, Procurement*, Working Paper 201, Mirvac School of Sustainable Development, Bond University).

Supply chain A long-term association of buyers and sellers working in their common interest toward the improved efficiency, reduced cost, supply certainty and better risk management. A supply chain producing electricity will typically involve a gas or coal producer, a pipeline or rail business, an electricity generator, the owner of transmission networks and an electricity distributor.

Supported debt model A form of state support for PPP projects in adverse capital market conditions when debt capital is in short supply or long-dated maturities are unavailable. A state agency assumes the role of senior lender and advances up to 70% of the value of the project. Such arrangements are purported to reduce borrowing costs and thereby improve value for money to the state.

SVA Shareholder value added.

Swap A form of financial risk management in which a security of value with say a spot pricing exposure is exchanged for a security of equal value that has a forward pricing exposure. Swaps enable an investor or trader to hedge exposures in capital markets.

Syndication The fragmentation of an asset or a liability over a number of parties. Banks may syndicate a large loan and investors may syndicate a property investment. Syndication gives small investors the opportunity to access larger assets and lenders to diversify their portfolio risk.

Systematic risk The systemic risks in an economy or nation such as changes in fiscal and monetary policy (taxation and interest rates respectively), change of government or certain risk events (natural disasters and war). Systematic risk cannot be mitigated by investors with diversification. The term is used to describe the riskiness of a security in a traded securities market. The return and price of a security is measured against the movement of the market as a whole. Assuming a market performance a beta of 1), a security with a greater volatility than the market will have a beta greater than 1. Assets such as listed property trusts and infrastructure companies generally have a beta in the range 0.6 to 0.8 which reflects low volatility compared with the market as a whole. See **beta**.

Take or pay contract A contract that requires to buyer to pay for a given

quantity of output or service delivery over time regardless of the amount actually delivered or consumed. For example, in UK National Health Service PPP contracts, the provider of the hospital facility is paid on the basis of the number of bed made available and not the number of in-patients. Take or pay contracts mitigate patronage or market risk in long-term infrastructure undertakings and facilitate project finance.

Tariff A charge or fee. See **availability charge, capital charge, unitary payment**.

Tax benefit transfer A term that describes the organisational structures that permit the tax deductions and losses of an investment to be directly attributed to the investors. Typically, these structures include unincorporated investment vehicles such as joint ventures and partnership.

Tax transparency A term that describes the organisational structure that enables the tax deductions for a particular form of investment to be passed directly to investors. An example in Australia is the use of unit trusts as an investment vehicle for investments in capital-intensive assets such as commercial buildings or infrastructure. The investments accruing to the investment by way of depreciation and the capital allowance may afford partial tax shelter to the return received by unit holders.

TDC Traditional design and construction contract.

Technology transfer Mechanisms for the transfer and use of technology between jurisdictions. For example, countries with a low-level of research and development will create or encourage contracts that permit the transfer of technology and know-how with a view to improving the skills and competitiveness of domestic industry and human capital.

Tender A method of procurement by which persons are invited to lodge bids to meet the predetermined scope of

works for the provision of goods and/or services. Tenders may be open and available to all or they may be closed by the use of invitations or prequalification. The winning bidder will best meet tender criteria which in the construction industry, is weighted heavily in favour of lowest price. See **input specification, value for money (VfM)**.

Tenor The term or maturity of a debt security.

Tenure An interest or occupancy of land or the term of an interest in land. In PPPs, this refers to the term of a lease, licence or contract that is required for the conduct of a franchise or concession.

Term sheet A *pro forma* quotation for finance issued by a lender that contains the main terms, conditions and pricing of a loan.

Term structure of interest rates This is also described as the yield curve and measures the differences in pricing of interest rates over time. A positive yield curve is one where longer term interest rates are higher than those of shorter terms. The yield curve is a dynamic indicator and reflects the long-term expectations and outlook in capital markets.

TFP Total factor productivity is a measure of output per capita attributable to both labour and capital productivity components.

Tied grants. See Specific purpose grants

Time value of money The principle that money received in the future is worth less than it is today. The reasons advanced for the real depreciation of future cash flows include (a) economic growth – a future receipt will account for a smaller percentage of income and assets in the future than it will today, (b) foregone income from the use of the money in the intervening period, (c) decline in the utility growth factor

arising from uncertainty about the future.

Total return The return on investment including yield and capital growth.

Traditional procurement (TDC) The procurement of good and services using an input specification, lowest price tender and an adversarial approach to contract administration, project management, disputes and other claims.

Transfer payment A reallocation of income from one part of the economy to another. Transfer payments do not create new economic activity. For example, revenue collected from a tax on mining companies may be used to finance state pensions for the aged or subsistence payments to the unemployed. This effectively reallocates money from corporations to low-income individuals.

Treynor ratio A statistical measure of a security's returns in excess of a risk-free rate.

Tripartite agreement An agreement between three parties and commonly found in construction finance arrangements. A tripartite agreement may be entered into between the builder, the landowner and the construction financier with a view to creating rights and obligation in the event of default under one or more of the primary agreements between the parties.

Triple bottom line describes organisational reporting frameworks that measures ecological, social and financial performance of the entity.

Turnkey contract A contract with an organisation who is solely responsible for the design, construction, engineering and services needed to undertake a project. Some variations of this contract may also require the organisation to finance construction with a view to settlement on commissioning.

UCIV Unlisted Collective Investment Vehicle

UKP United Kingdom Pounds

Unbundling The disaggregation of vertical industry networks. For example, in the electricity industry, the breaking up of vertically integrated state-owned monopolies into separate and independently regulated electricity generation, transmission and distribution sectors.

Uncertainty The probability of a future event that cannot be statistically estimated. Examples include adverse natural events such as earthquakes and floods or events of a socio-political nature such as revolution, riots, wars and unexpected change of government.

Underlying credit rating is a term used to describe the credit rating of a project without credit enhancement or wrapping. See **credit wrapping**.

Underlying inflation The price of a basket of goods minus items that exhibit price volatility.

Underwriter, underwriting An enterprise that guarantees a minimum subscription to a share or debt issue. If the capital raising fails to achieve the minimum subscription agreed, the underwriter is required to subscribe for any shortfall.

Unitary charge or payment refers to a fixed charge per unit of production under a long-term contract to supply a service. For example, under a **PPP** arrangement, the private operator is required to furnish a minimum number of fully serviceable beds together with linen and support equipment to the hospital each day. The cost of providing and maintaining the beds is the responsibility of the contractor who is paid a quarterly unitary or availability charge based on bed availability. See capital charge, availability payment.

Unitisation The fragmentation of ownership and frequently management and control of an investment or asset. Unitised investments are a form of indirect

ownership and examples include listed trading companies and property trusts.

Unlisted security A security that is not quoted on a securities exchange.

Unsecured creditor A creditor that does not hold security in relation to monies owed.

Unsystematic risk The risks attaching to a specific project or investment. The unsystematic risk profile will be different for each construction project taking into account matters such as governing jurisdiction and different planning requirements, traffic and site conditions, the use of adjoining buildings, proximity to services and access.

User charges The imposition of fees and charges for the use of certain public goods and state-owned utilities. For example, fees applied for admission to council car parks, highways, art galleries and national or state parks and flora/fauna reserves.

Value engineering A methodological approach to the design of buildings and operational systems to ensure each component will meet the performance specification, least **lifecycle costs** and best **value for money**.

Value management A technique that achieves optimal value for money using systematic project review processes that examines all components of a system to ensure they are achieving their objective at lowest cost. Those components found to be under-performing are replaced with the best-practice option.

Value curve The value of an asset over time.

Value for money (VFM) A measure of project procurement or outsourcing that includes a number of quantitative and qualitative benefits not always readily identified in a lowest-price tender process. Value for money is a broad construct that may include:

- Contract tenure or duration

- Reduction in capital outlays or lifecycle repair and maintenance costs
- Variations or additions that create additional utility or value for the state
- Improvements to the quality, reliability or scope of service delivery
- Enhancements to the public interest
- Design amenity (design or construction innovation, asset functionality and aesthetics)
- The sustainability of service delivery.
- User benefits.

In Australian PPP policy, VFM is both a quantitative and a qualitative risk-adjusted assessment of the most efficient method of state delivery. It is used as a public sector comparator for evaluation of bids from private firms (Partnerships Victoria 2001, Public Sector Comparator, Technical Note, Department of Treasury and Finance, Melbourne).

Variable, floating rate of interest A rate of interest linked to a prevailing market indicator.

Variation Departure from the original specification. The difference between what was originally required to complete a task and what is actually required given a change in site conditions, operational specification or an **externality**.

Vertical integration Ownership of a number of the stages of a supply chain. In the electricity industry, for example, vertically integrated enterprises are engaged in energy generation and also “downstream” sectors of the industry such as energy transmission and distribution.

Vertical fiscal imbalance (VFI) VFI exists when one level of government (the Commonwealth) raises the majority of national public revenue

and, other levels of government (the States and local government) are responsible for most public expenditures. VFI identifies the gap between the two aggregates and introduces the policy options available for managing it.

Vertical separation Regulations designed to limit opportunities for firms to acquire other firms in the supply chain and hence assume greater market power.

VFM See Value for money

WACC Weighted Average Cost of Capital. WACC is used to calculate the cost to an enterprise of raising debt and equity capital to enter into a particular undertaking. WACC is the weighted average cost of the debt and equity components of enterprise or project capitalisation. WACC is often used by regulators when applying CPI-X price caps to set the output pricing for utilities.

Warrant An option. A certificate that gives the bearer or registered owner the right to purchase shares of stock at a stipulated price within a specified period of time or indefinitely. See **option**.

Warranty A promise, assurance or undertaking contained in an agreement or offered by the vendor of plant and equipment.

Washington Consensus

Wasting asset An asset with a finite life that has little or no residual value. For example, a mine or a quarry. A PPP project that is structured as a franchise and/or a lease may be considered a wasting asset for accounting, tax and investment purposes.

Weighting The structuring of measurement criteria to favour specific characteristics.

Wet lease A lease contract under which the provider of goods also operates the goods and carries operating responsibilities. For

example, a car and driver. See **dry lease**.

Whole-life asset economics The financial aspects of asset provision and operation over the term of a contract or the economic life of the asset. It is similar to an operating lease whereby the provider of the service undertakes to meet the costs of real depreciation and the operation and maintenance of the asset over its service life.

Withholding tax A tax applied to transfers of money. Examples of withholding taxes include payment of salary and wages and transfers of interest and dividends to non-resident investors.

Work package A segment of effort required to be complete a specific job such as a research or technological study or report, test or evaluation, design specification, piece of hardware, software, drawings, survey or procurement phase which is under the direction and management of a single unit within an organisation.

Working capital The cash required to meet the day to day operational requirements of a business. It is to be distinguished from fixed capital which is the capital invested in fixed assets such as land, buildings and equipment.

Wrapped bonds A bond issued by an organisation with the redemption and/or rate of return guaranteed by a monoline insurer.

Yield The return from an investment expressed as an annualised percentage of investment capital. Yield generally excludes capital growth

Yield curve The difference in yield between long and short-dated government bonds.

Zero coupon security A security that does not offer a coupon or income stream but whose return may take the form of a discount at the time of offer or a premium paid to holders at redemption.

Acknowledgements

In addition to specific references in the text, the following publications were used to confirm or resolve ambiguities in the terms used in the compilation of this dictionary.

Agar, C. 2005, *Capital Investment and Financing: A Practical Guide to Financial Evaluation*, Elsevier, Oxford.

Bannock, G. Manser, W. 1995, *the Penguin International Dictionary of Finance*, Penguin Books, London.

H.M. Treasury 2003, 2007 *The Green Book*, The Stationary Office, London.

Khan, M.F.K. Parra, R.J. 2003, *Financing Large Projects*, Pearson Prentice Hall, Singapore.

Luskin, D. Dobes, L. 1999, *Facts and Furphies in Benefit-Cost Analysis: Transport*, Report 100, Bureau of Transport Economics, Canberra.

Regan, M.E. 1993, *Australian Business Dictionary*, Information Australia, Melbourne.

Regan, M.E. 2004, *Infrastructure: A New Asset Class in Australia*, Benetti Publishing, Melbourne.

Regan, M.E. 2005, *Public Private Partnerships: Adding Value to Public Infrastructure Procurement?* Australian Centre for Public Infrastructure, Research Paper 05/05, the University of Melbourne, Melbourne.

Rutherford, D. 2002, *Routledge Dictionary of Economics*, 2nd. edn. Routledge, London.

Shares, 2004, *Tables*, June, Fairfax Publications, Sydney.

Standard & Poors 2000, *Public Finance Criteria*, New York