

InfraRead

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NSW GOVERNMENT EFFECTS MAJOR ASSET PRIVATISATION: WestConnex sale tips Asset Recycling Model into overdrive

BY ANGUS FOLEY AND ACHAL GUPTA

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BY CAMERON SMITH AND PATRICK BOYLE

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An overview of this issue

I am delighted to introduce this twelfth issue of **InfraRead**, our biannual publication covering a range of legal and transactional issues relevant to the global transport and infrastructure space.



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Emerging trends in Asia: New models for financing infrastructure investment in south and southeast Asia p8

The governments of emerging markets in Asia have recognised for some time the need to increase private sector investment in infrastructure, in order to close the region's "infrastructure gap". The unique characteristics of the region means that, rather than simply adopting investment models from other more mature markets, the governments of south and southeast Asia have decided to develop their own distinct models. In this article we examine the current trends in structuring and financing infrastructure projects in Asia's emerging markets, including the increasing use of blended public and private financing models and the increasing role for capital markets.

Chocks away!: Privatisation of Aéroports de Paris gets ready for take-off p14

Earlier this year the French government presented a bill to parliament detailing the proposed arrangements for the privatisation of Aéroports de Paris, the "jewel in the crown" of the French airports sector. Parliamentary discussion of the bill is now underway, but this will take time and it is not anticipated that the bill will be adopted before the beginning of next year. This article describes the proposed arrangements for the privatisation and highlights the key issues which need to be addressed in order for these plans to come to fruition.

Investing in Saudi Arabia: Key areas of Saudi law and dispute resolution p19

Saudi Arabia's "Vision 2030" sets out the Saudi government's road map for diversifying its economy and addressing the challenges brought about by low global energy prices. It is estimated that there are US\$1.4 trillion worth of major projects planned or currently underway in Saudi Arabia, in sectors such as housing, healthcare, education and transport. An understanding of the legal landscape and the issues to be aware of, particularly in relation to dispute resolution, is therefore critical for potential investors. This article provides a high-level summary of the key issues.

New options for German infrastructure funding: First financing by institutional investors of regional passenger rail network reaches financial close p23

The financing of the Ulm diesel rail network, which closed in July 2018, was the first financing in the German regional passenger rail sector to have been provided directly by institutional investors. In this article the Ashurst lawyers who advised the investors explain the background to the deal, the aspects of the deal which made it particularly suited to this innovative form of funding – and how financial close was reached within three months.

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This article, the fourth in our "Waste-to-wealth" series exploring the global waste sector, focusses on the range of waste projects available across the globe, the policy settings which need to be in place to enable such projects to be developed and the key risks which need to be addressed – either through government policy or contractual mechanisms – to make waste projects economically viable.

Waste not, want not: Energy-from-Waste refinancings – the opportunities and challenges p36

The past two years have seen a marked uptick in levels of refinancing activity in the UK and Irish energy-from-waste (EfW) sectors, and a greater appreciation of the financial benefits available to sponsors from refinancing their existing projects. The reasons for this include historically low interest rates, increased liquidity in the debt markets, and the greater maturity of the EfW sector. This article summarises the various forms of refinancing structures available and the factors which need to be taken into account when deciding which form of refinancing structure to adopt in different circumstances.

This publication is not intended to be a comprehensive review of all developments in the law and practice, or to cover all aspects of those referred to. Readers should take legal advice before applying the information contained in this publication to specific issues or transactions. If you have any comments about this edition or suggestions for future editions, please contact us at infraread@ashurst.com. If you would like to contact Ashurst please visit Ashurst.com/contactus and one of our team will be happy to help you.

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**NSW GOVERNMENT EFFECTS
MAJOR ASSET PRIVATISATION:**

WestConnex sale tips Asset Recycling Model into overdrive

By Angus Foley and Achal Gupta

The New South Wales (NSW) State Government has recently completed the sale of a 51 per cent interest in the concession-holding entities delivering the WestConnex motorway project. The partial sale of WestConnex confirms the value to governments and the private sector of the "asset recycling model" of infrastructure delivery.

The underlying assets

WestConnex is a complicated series of transactions, involving the separate procurement of three major motorway tunnel projects, the operational integration of these three motorways and the sale of 51 per cent of the equity in the entities holding the concessions to operate and toll the roads. On the sale, the NSW Treasurer was pleased to declare: "*The transaction not only funds the completion of the congestion-busting WestConnex, but will allow the Government to inject billions more towards infrastructure projects like new schools and hospitals*".

The WestConnex assets form part of a 33 km combination of motorways in the heart of Sydney, Australia's largest city. Western Sydney is one of the key regions of population growth in Sydney and has one of the largest growing urban populations in Australia. Once completed, WestConnex will link this growing population and the industrial areas of Western Sydney with Sydney's key economic and employment regions (the central business district and airport corridor). The completed motorway will also provide vital links to the major international gateways at Sydney Airport and Port Botany.

The WestConnex programme of works comprises the following three construction Stages, shown in the diagram opposite:

- Stage 1 (green) - The New M4 being the M4 East (a new 6.5 km tunnel) and a 7.5 km widening of the M4 West;
- Stage 2 (light blue) – The New M5 being a new 11 km tunnel which, when completed, will form part of the M5 Motorway concession along with the existing 10 km M5 East and, from 2026, the existing 21.5 km M5 West Motorway; and
- Stage 3 (dark blue) – The M4-M5 Link being a new 7.5 km twin tube tunnel connecting Stages 1 and 2, to be separately followed by a major interchange at Rozelle and a link to the Iron Cove bridge.

The total cost of delivering WestConnex is expected to be A\$16.8 billion. The widening of the M4 West is already complete and the other elements of the new works are expected to be delivered in various stages between now and 2023.

The need for the project in terms of reducing congestion and providing transport links across the city was demonstrated in a strong "Benefit Cost Ratio" of 1.88 assessed at the commencement of the project.

A procurement programme structured for sale

At the heart of the NSW Government's business case for WestConnex was a strategic decision to effect a sale of the toll road concessions. However, the size and complexity of the project and investor appetite at the time the project commenced in 2012 dictated that the State would not achieve a value-for-money outcome by undertaking a traditional PPP-type procurement approach.

As a result, the NSW Government adopted a number of innovative approaches to the procurement and delivery of WestConnex, all designed to optimise the outcome for the State upon sale. The first of these innovations was to separate the procurement of the design and construction of the project from the sale of the concession. To achieve this separation, the NSW Government created a state-owned company, Sydney Motorway Corporation (SMC), which undertook the procurement of the D&C packages. SMC took on roles traditionally performed by the NSW Roads and Maritime Services (RMS), such as project scoping and setting the overall project requirements.

SMC was established as a non-guaranteed private limited company 100 per cent owned by the NSW Government. SMC in turn established subsidiaries for each project stage which were special purpose vehicles that would enter into the project deeds with RMS. These project deeds set out the terms of the concession and the right to toll the roads until 2060. In anticipation of the expected sale, the project deeds were arm's length to RMS, the SMC entities were restructured in a tax-efficient dual trust arrangement and appropriate tax rulings for a post-sale operation were obtained.

Also, non-recourse project financing was secured for each of Stage 2 (with financial close in 2015) and Stage 1 (with financial close in 2016). This standard form project financing was not guaranteed by the State and involved banks taking both

construction and patronage (demand) risk on each of the individual stages. The technical and traffic due diligence undertaken by the banks for the debt funding combined with the arm's length investment decision-making by the SMC board in relation to the equity element provided a rigorous and independent review of the structuring of each Stage.

Stage 3 was then procured in parallel with the sale process and reached financial close at the same time as the sale process.

The sale process and outcome

The NSW Government ran a sale process for the equity in each of the project vehicles. The sale process was "quarantined" from the underlying concessions for each of the Stages: in other words, the potential bidders had no opportunity to re-negotiate the underlying project documentation or financing. In effect, each of the concessions for the three stages of WestConnex was sold on an "as is" basis. This approach enabled the management of the ongoing construction activities for Stages 1 and 2 and the procurement of the D&C Contractor for Stage 3 to proceed in parallel with the sale process.

The consortium Sydney Transport Partners (STP), led by Transurban, was the successful bidder in the sale process. The STP consortium comprises Transurban (50 per cent), AustralianSuper (20.5 per cent), Cppib (20.5 per cent) and Tawreed Investments Limited, a wholly owned subsidiary of Abu Dhabi Investment Authority (9 per cent). STP entered into a Sale and Purchase Agreement to purchase the 51 per cent equity stake in WestConnex from the NSW Government for A\$9.3 billion. The STP Consortium and the NSW Government also entered into a unitholders' agreement.¹

¹ A unitholders' agreement is the equivalent of a shareholders' agreement where the operating vehicle is a trust.

Indicative diagram of WestConnex programme of works

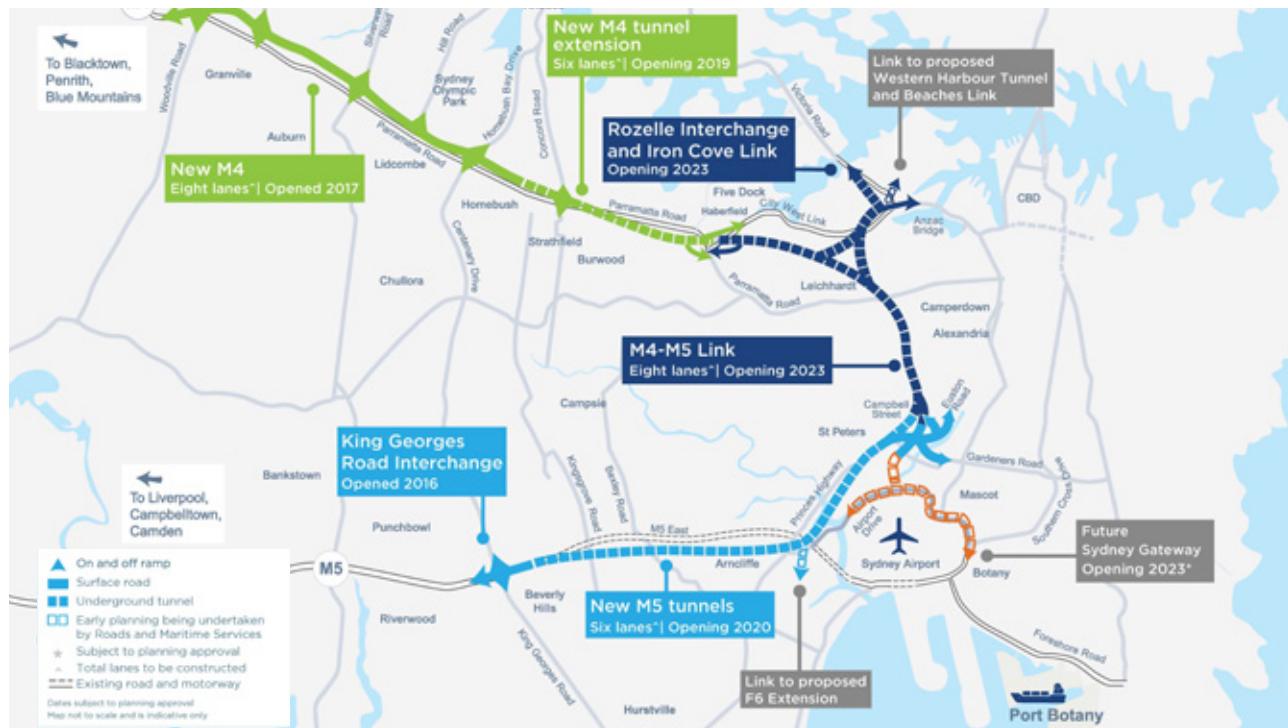


Image provided by Sydney Motorway Corporation



Image provided by Sydney Motorway Corporation

As the diagram below sets out, based on the STP purchase price, the enterprise value of the equity in WestConnex is A\$25.2 billion, taking into account the existing debt funding and cost-to-complete of the various stages.

With a A\$16.8 billion expected cost for the WestConnex project, the NSW Government was very satisfied with the outcome of the equity sale. The State's full intentions with respect to its remaining 49 per cent interest in WestConnex is yet to be announced but, based on the STP purchase price, it currently has a value of around A\$9.0 billion.

Multiple construction works packages

The A\$16.8 billion expected cost of the new works was far too large for the Australian contractor market to manage under a single contract. Therefore, the NSW Government divided the scope of work into five major construction packages: two for Stage 1, one for Stage 2 and two for Stage 3. For three of the construction packages (which were each valued around or above A\$3 billion), local and

international construction contractors formed joint ventures of three or more entities. The composition of the joint ventures differed between the various procurements and no one D&C contractor was successful on all four of the packages which have been tendered to date. The final package (for Rozelle Interchange) is expected to be awarded later this year.

The staging of the procurement for the D&C works provided the market with a constant stream of bidding opportunities for more than five years. Competitive tension was achieved on all packages and the market became familiar with the risk profile, which mirrored that in the Project Deed.

A major challenge in the procurement of the M4-M5 Link Main Tunnel works was how to achieve integration of the M4-M5 Link tunnel with the New M5 tunnel and M4 East tunnel which were at that time under construction. Further challenges included the use of a single motorway control centre and significant retro-fitting works to the existing motorway control centre, which is to be undertaken by the Stage 3 D&C contractor.

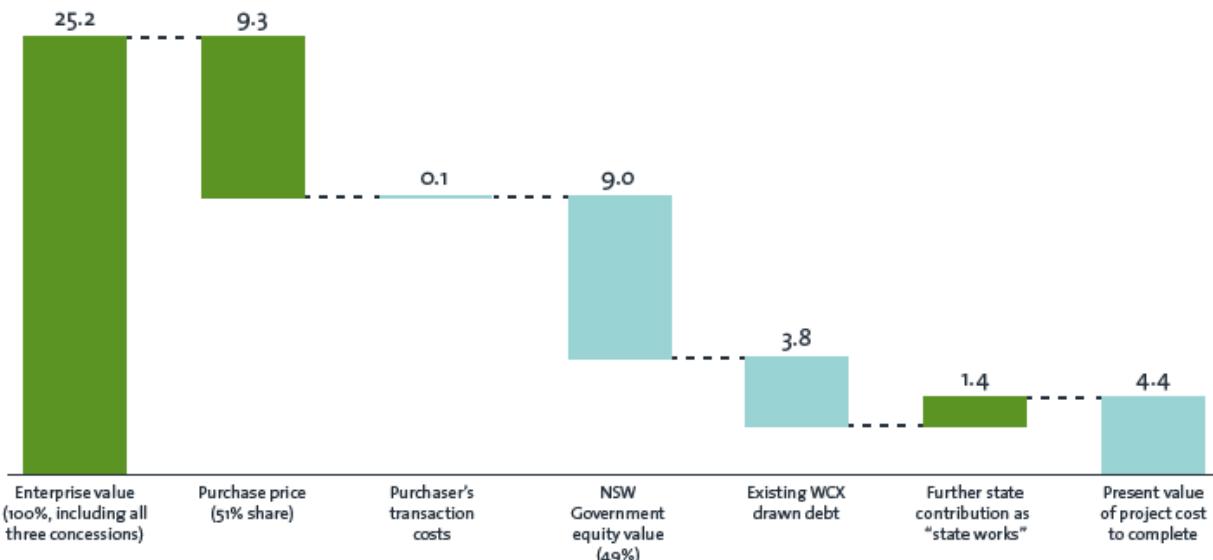
Maintaining a fair and competitive bidding basis was a key consideration and was balanced against the risk allocation under the D&C contract. The M4-M5 Link Main Tunnel provided an additional challenge given that completion of this element of the works required the entire WestConnex programme to operate on an integrated basis. Some of this integration risk was mitigated through SMC mandating key technology providers (initially selected for earlier stages on a competitive basis) as nominated sub-contractors for Stage 3.

Patronage-based project financings

The project is being funded through a combination of NSW Government contributions, a Commonwealth of Australia concessional loan, private financing and a distance-based toll.

The sale transaction leveraged the existing project financings for Stages 1 and 2 which SMC had put in place earlier in the project. These were traditional patronage-based, non-recourse financing

WestConnex construction funding composition (A\$billion)



Source: Transurban Retail Entitlement Offer – 5 September 2018

arrangements, supported by technical and commercial due diligence. Both financing transactions had been well supported by the project finance bank market and marked the first successful patronage risk road financings in Australia following a number of high-profile challenges in the sector.

The concessional loan structure provided by the Commonwealth of Australia was used to partially finance Stage 2 of WestConnex, the initial purpose of the loan being to allow the State to accelerate capital recycling by proceeding with Stage 2 before the State sold down its equity interest in Stage 1. The concessional loan was structured as subordinate debt and a heavily structured intercreditor arrangement was put in place to regulate the Commonwealth's relationship with the initial senior syndicated lenders and to facilitate future financing and re-gearing arrangements.

A key feature of the structuring of WestConnex was the combination of greenfield and brownfield traffic risk. This was achieved for both Stage 1 and Stage 2. By the time of the sale, the financing arrangements for Stage 1 and Stage 2 had been developed so as to work in conjunction with the development of Stage 3 and the integrated operation of the WestConnex motorway.

Planning approvals

Given the scale and impact of the WestConnex motorways across Sydney, the planning approval process was highly complex. The planning approval process was divided into separate State significant infrastructure (SSI) approvals. These separate SSI approvals allowed for local impact issues to be dealt with in sufficient detail to address community and stakeholder concerns. The use of separate planning approvals matched the three-stage procurement of WestConnex and allowed for the conditions to be aligned to the D&C packages and for an appropriate risk allocation to be achieved in the D&C contracts.



Image provided by Sydney Motorway Corporation

Given the accelerated nature of the entire project, one challenging feature was that the D&C contracts for the early stages of WestConnex were signed prior to the granting of the planning approval for the respective stages. This necessitated a solution to enable the procurement process to be completed within the time frames required for the overall project delivery.

Operations and Operational Integration

A key challenge in structuring the operations of the three separate toll road concessions was to ensure the safe operation of the separate motorway tunnels which join up underground. Key concerns included the need for a co-ordinated response to major incidents and efficiencies in the operation of the roads. The ability to achieve savings on key cost items such as electricity was an important but secondary consideration. The WestConnex approach to these issues involved a unique "OpCo" structure which devolved a defined scope of integrated operations works to a new entity jointly owned by the three concession-holding entities. Cross-default risk between the concession holders was mitigated through the design of the motorways and, at a contractual level, through a fault attribution mechanism under which limited relief was provided to RMS for non-defaulting concession holders. In return, RMS obtained the right to integrate future motorways into the structure.

Conclusions

WestConnex has proven to be a highly successful infrastructure development for the State of NSW. Despite its complexity, the innovative structure enabled SMC to break down the various elements of the project and to deliver both a value-for-money outcome on the individual procurements, as well as a strong sale price on privatisation. The accelerated timing for the entire process was a challenge but nevertheless validated the use of the asset recycling model to fund this ambitious project.

Our roles

Ashurst has been a key legal adviser to the NSW State Government and its agencies on the WestConnex deal. Our roles have included: lead legal adviser on structuring and drafting the toll road concessions for Stages 1, 2 and 3; sole legal adviser on the D&C procurements for Stages 2 and 3; sole legal adviser to RMS on the planning approvals; sole legal adviser on the debt raising for Stages 1 and 2 and joint legal adviser to Sydney Motorway Corporation on the sale of a 51 per cent equity interest in the WestConnex concession-holding entities.



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EMERGING TRENDS IN ASIA:

New models for financing infrastructure investment in south and southeast Asia

by Harriet Gray and Alexis Rosenberg, with contributions from Anna Marie-Slot, Anna Hermelin and Giles Ashman

In this article, we look at current trends in financing infrastructure in south and southeast Asia – from "hybrid structures" in the Philippines, to efforts to encourage the involvement of capital markets in infrastructure.

When it comes to emerging markets in Asia, the "infrastructure gap" term is all too familiar (the major gap between a country's infrastructure needs and the ability of its government to fund those needs). The Asian Development Bank (ADB) reported last year that Asia will need to invest US\$26 trillion between 2016 to 2030 – equivalent to US\$1.7 trillion per year – on developing its transport, power, telecommunications and water supply and sanitation sectors, to support its current predicted growth rates.¹ If social infrastructure (mainly education and health) is also factored in, then the financing gap for infrastructure widens further.

Traditionally, financing for infrastructure in Asia has been dominated by public sector funding (whether through direct government budgetary funding, official development assistance or other concessionary loans at the sovereign level) although private sector financing has remained consistent in the power and telecommunications sectors. Private sector financing of transport, water and social infrastructure has not yet made a significant impact, in part due to the lack of a pipeline of bankable projects with a viable risk allocation. Motivated by the region's huge infrastructure

needs (it has been estimated that private financing will need to increase fourfold to close the infrastructure gap) and with assistance from multilateral banks and platforms such as the G20 Global Infrastructure Hub, governments across Asia have sought to put in place the necessary legal regimes and programmes to encourage greater levels of private finance and investment in a wider pool of infrastructure classes. Examples include the public private partnership or build-operate-transfer legislation and/or programmes brought into effect in Thailand, the Philippines, Vietnam and Bangladesh (to name but a few) and the formalisation of supporting institutions and mechanisms such as the Indonesia Infrastructure Guarantee Fund.

The governments of emerging markets in Asia recognise the need to introduce private sector investment in infrastructure, such as public private partnerships (PPPs), in a way that recognises the unique characteristics of each country. Governments are not, therefore, simply lifting and adapting the PPP model from countries such as the UK, Australia and Canada, but are instead developing their own distinctive models for procuring new infrastructure in order to minimise some of the historical barriers to private investment.

In this article, we consider three discernible trends in the structuring and financing of infrastructure projects in Asia's

¹ Asian Development Bank, "Meeting Asia's Infrastructure Needs" (February 2017).

emerging markets,² as governments seek to accelerate the development of much needed infrastructure:

- the increasing use of blended public and private financing models;
- the move away from pure demand risk payment structures in order to make projects more attractive to the private sector; and
- the increasing role for capital markets.

Given that the private financing of the power and telecommunications sectors in Asia is, for the most part, well-established, this article focuses on the financing options for the other infrastructure categories, including transport, water and social infrastructure.

Blending public sector and private sector financing

Public sector funding remains the largest source of infrastructure financing in Asia. The ratio of public to private financing in Asia is 2:1 to 3:1, compared to 1:2 in Europe and North America.³ Asian governments are therefore under pressure to increase the level of private financing in order to meet the scale of infrastructure investment required as well as needing to implement projects quickly to keep pace with economic development and the demands of their population.

Official development assistance (ODA) and other forms of government-to-government (G2G) support have long played an important role in funding infrastructure in emerging markets in Asia and continue to do so, particularly in the context of China's "One Belt, One Road" initiative. In this context, an emerging trend

2 The range of countries across Asia and the differing levels of development, political appetite and investment incentives in the various jurisdictions prohibit a continent-wide discussion of every issue. This article therefore focuses on certain themes that are emerging for infrastructure financing in the developing countries in south and southeast Asia. In addition, China has been deliberately excluded from the review, as the size and diversity of its market merits an article in its own right.

3 See <http://oecdinsights.org/2017/02/03/more-private-capital-for-infrastructure-investment-in-asia/>.



in developing Asia is the increasing use of a blend of ODA and G2G financing alongside private financing to procure new infrastructure projects. Some examples of this emerging trend are described below.

"Build, build, build" – Funding infrastructure in the Philippines and Vietnam through a blend of ODA and private finance

In the Philippines, President Rodrigo Duterte's predecessor, President Aquino, launched the Public-Private Partnership Center of the Philippines in 2011, setting the tone for his government's focus on procuring infrastructure development under a design-build-finance-operate-maintain model or variations of the same. With a strong pipeline of projects targeted for development, interest from international infrastructure sponsors and investors was high, particularly for such high-profile projects as the regional airports, NAIA Airport and the North-South Railway projects. However, the administration ran out of time and was unable to complete the procurement of these and other projects before the change of government in 2016.

International infrastructure sponsors and investors therefore watched the transition to President Duterte's administration closely, looking for assurances that the programme of infrastructure projects would continue apace. In July 2017, President Duterte highlighted infrastructure development as a priority with the now well-known statement that: "In other words, we are going to build, build and build". Public spending on infrastructure projects is reported to be targeted to reach 8-9 trillion pesos (approximately US\$154 to US\$173 billion) between 2017 and 2022. Under what is now known as the "Build, Build, Build" programme, President Duterte's government plans to roll out 75 flagship projects, in sectors including ports, airports, roads and railways. With a focus on speed and on infrastructure development outside of the capital Manila, President Duterte has shown a willingness to blend financing structures and procurement models to develop what the Ministry of Finance in the Philippines refers to as the "hybrid PPP" model. The administration hopes to speed up the pace of the country's infrastructure development by funding it through a mixture of local taxes (for example, the new "Tax Reform for Acceleration and Inclusion" (TRAIN) is expected to fund approximately 25 per cent of the Build, Build, Build programme), ODA and G2G financing and private financing.

In the road sector, the government has fast-tracked two road projects, the Plaridel Bypass Road and the Central Luzon Link Expressway, through the use of its hybrid PPP model. As a result, the design and build will be financed through ODA while the operation and maintenance will be procured under a PPP-type arrangement. A similar approach is being adopted for the Clark Airport expansion. A key government objective in adopting such a hybrid model for "big ticket" projects is to speed up the procurement process following much publicised delays in the procurement process of early PPP projects in the Philippines. Under the hybrid PPP arrangement, the government can break ground on the design and build of a project, while the procurement process for the operation and maintenance under a PPP model takes place. A second key objective is to marry the benefits of utilising the lower borrowing rates of concession loans and grants to construct a project with the private sector's expertise in managing, operating and maintaining infrastructure assets.



The structuring of the O&M concession may either be by way of availability payments to the project company or through the project company taking some elements of demand risk (and potentially receiving greater upside revenues as a result). Some observers may argue that this "hybrid PPP" is not in fact a PPP at all and that it brings with it other issues such as defects liability on government-built infrastructure, as well as interface risk during the early years of operations. The model also potentially removes a key benefit of traditional PPP development, namely having the project developed on a "whole of life" basis.

We understand that the PPP Center is looking to develop this model further by adopting a revised financing strategy under which the government would continue to utilise ODA to secure lower cost financing, but would then pass the funds to a private company, enabling the private company to construct as well as to operate and maintain the project. This differs from the existing "hybrid" scheme described above in that it attempts to retain the traditional benefit of "whole of life" design.

The Duterte administration has also been keen to emphasise that unsolicited proposals from the private sector for projects that are fully privately financed are still strongly encouraged, and that a number of major unsolicited proposals remain under consideration by the government.

Another nation experimenting with innovative applications of ODA funding is Vietnam. Recently, the Ministry of Planning and Investment announced a draft decree relating to the management and use of ODA and preferential loans from foreign donors, under which the private sector would be granted the right to access and use ODA and preferential capital. It is still too early to assess how this change will be perceived by the market, but the issue remains that loans to private businesses from ODA capital carry comparatively high interest rates as well as imposing strict requirements on ODA borrowers. Nevertheless, such loans may still prove very attractive to private investors unable to access other sources of capital, and in turn stimulate infrastructure development within Vietnam.

Infrastructure development through G2G partnerships – Bangladesh

In 2015, the government of Bangladesh passed the Public-Private Partnership Act, 2015 (PPP Act) as part of its Vision 2021 goal of procuring high quality public infrastructure in a fiscally sustainable manner. The purpose of the PPP Act was to provide a clear and transparent legal framework for the procurement of infrastructure on a PPP basis and thereby to attract international sponsors and lenders to invest in the transport and social infrastructure sectors as they have done in the power sector for a number of years.

Under the powers granted in the PPP Act, in 2017 the Public Private Partnership Authority issued its Policy for Implementing PPP Projects through Government-to-Government (G2G) Partnership, 2017 (G2G Policy). The purpose of the G2G Policy is to provide a framework for infrastructure projects to be implemented with financial support from other governments. To the extent another government, with whom a memorandum of understanding has been signed, agrees to contribute financial support to a project by means of: (i) funding to the government of Bangladesh to be injected as equity or debt in the project; (ii) funding to one or more public authorities or state-owned entities or financial institutions to invest equity or debt in the project; or (iii) funding to sponsors to provide equity support to the project company, the other government may select state-owned or private entities to implement the infrastructure project on a PPP basis.

To date, memoranda of understanding have been signed with the governments of Japan and Singapore and others are under discussion. The G2G policy is not intended to deter sponsors and investors from those countries that may not yet have agreed such memoranda of understanding. It will only be utilised for projects that make sense in the context of a particular G2G arrangement (for example, six large PPP schemes have been identified in the memorandum of understanding with Japan). Undoubtedly this development will be watched closely by other governments in the region to establish how successful it is in fast-tracking the procurement of key infrastructure projects.

This financing approach is attractive to governments keen to support the success of their own domestic businesses in their export trade and overseas investments as it mitigates the risk of competitive bidding procedures. For the Bangladesh government, it widens its pool of available financing for infrastructure, while retaining the benefits of PPP, including risk transfer to a private sector party that is better able to manage those risks, innovation and cost certainty.

Achieving a viable revenue risk allocation

In the past decade, particularly following the global financial crisis of 2007-2008 and the failure of a number of demand risk projects across Asia (especially in the port and road sectors), there has been a general antipathy to the sponsoring and financing of projects that expose the project company to demand risk.

Traditionally, however, governments across Asia – including Indonesia, Thailand and the Philippines – have been keen to transfer revenue and demand risk to the private sector rather than retaining it as a public risk. This has seen, for example, a favouring of PPP models where the private sector is granted the right to collect and retain revenues (such as rail ticket fares or direct (real) tolls on toll roads), over availability payment regimes.

As governments across the region have become more sophisticated in their analysis of the value for money of projects and have listened to the calls of private financiers for projects with viable risk allocations in which to invest, there has been a growing acceptance and adoption of either full availability payment models (i.e. with full revenue and demand risk retained by government) or shared demand risk models (where the private sector takes some revenue and demand risk but also benefits from some downside

protection from the public sector). Such downside protection may be in the form of viability gap funding, i.e. capital payments during or at the end of construction to partly pay down the construction debt and thereby reduce the risk that future revenue receipts prove to be inadequate to repay such debt. It may also (alternatively or in combination with viability gap funding) take the form of a minimum revenue guarantee. In return for the government guaranteeing a minimum revenue, the quid pro quo is that any revenue receipts above a specified threshold are shared in some agreed proportion with the public sector. In other words, in return for sharing the risk of a downside demand scenario, the public sector is entitled to benefit from the upside scenario.

This increasing willingness by the public sector to take, or at least share in, revenue risk has been welcomed by sponsors as it allows them to obtain project finance for a project more easily, rather than borrowing on a corporate finance basis, and to use a wider pool of financial institutions, including export-import banks, in order to obtain optimal pricing. This, in turn, increases the value for money for the public sector. Some examples of this are set out in the table below.

Public sector taking on revenue risk: some recent examples

Indonesia

Indonesian Presidential Regulation No. 38/2015 introduced an “Availability Payment Scheme” for toll roads. Under this scheme, the authority pays the project company a specified availability payment, provided the road has been constructed and meets the minimum service standards prescribed in the concession agreement. The availability payment is based on the capital cost of the project, the O&M costs and the sponsor’s return on investment. The Serang-Panimbang toll road in Indonesia has recently been awarded under this Availability Payment Scheme.

Bangladesh

The government has a viability gap funding policy in place, which it has adopted on projects to reduce the overall construction risk. It has also adopted either minimum revenue guarantees or a full availability payment model on its latest toll road projects. The country benefits from a robust PPP Authority that has engaged with investors and sought to replicate the successful risk allocation regime adopted to attract foreign investors into the power sector to transport and social infrastructure projects.

India

Following a period in the early 2000s when a large number of toll road projects under which the private sector took full revenue risk had to be rescued, the Indian Government launched the “hybrid annuity model” (HAM) in 2015. The National Highways Authority of India (NHAI) approved the HAM in 2016 and 26 road projects were awarded under this model in the same year. The HAM has been credited with the dual benefit of reviving India’s road sector and reducing the financial burden on the private sector.

Under the HAM, NHAI releases 40 per cent of a project’s construction costs from its fund in five equal tranches linked to project completion milestones. The remaining 60 per cent of the construction costs are typically borne by the project company. The project company in reality funds no more than 20 to 25 per cent of that remaining 60 per cent, with the remainder being financed by debt. Sponsors therefore end up having to provide approximately 10 to 15 per cent equity funding for a project. In addition to NHAI funding 40 per cent of a project’s construction costs, demand risk is borne by the authority under the HAM. The authority remains responsible for toll collection and the project company is entitled to receive semi-annual annuity payments following project completion. These annuity payments – subject to: (i) deductions for failure to maintain the road; and (ii) making the road available as required under the concession agreement – enable the project company to recoup 60 per cent of the project’s construction costs that it has borne, as well as covering O&M costs, debt repayment and interest costs and further providing a return to sponsors. The subsidies provided by the authority under the HAM are therefore a hybrid of viability gap funding and availability payments.

Alleviating demand risk, either through an availability payment model or through other mitigants, is essential for some projects in south and southeast Asia to be bankable, and to attract much needed international private financing.



Capital markets and infrastructure in Asia: the perfect bond?

Even with the use of financing structures that blend public and private finance, and project structures that alleviate demand risk, traditional sources of infrastructure funding in Asia – i.e. the public purse and bank debt – are unlikely to ever be sufficient to bridge the infrastructure gap. Could capital markets be the answer? Investors are certainly interested: from infrastructure fund giants like Macquarie Infrastructure and Real Assets (which, earlier this year, closed a second Asia-focused infrastructure fund at US\$3.3 billion), to more conservative institutional investors such as Japan's Government Pension Investment Fund (the world's largest pension fund, which has announced plans to increase its alternative investments, including in infrastructure).⁴ However, construction risk, sub-investment grade rating, and weak domestic markets can pose barriers to entry for traditional capital markets investors. When it comes to successful capital markets investment in south and southeast Asian infrastructure, the emerging theme is the need to manage these risks with the right project and the right project bond structure.

Signs of growth: recent successes in Asian infrastructure bonds
The south and southeast Asian infrastructure project bond market is attractive for a number of reasons. As has been seen in the US and Europe, infrastructure can be well suited to capital markets investment. Project bonds offer institutional investors such as infrastructure funds, pension funds and insurance companies a predictable income over the medium to long term, which neatly aligns with the liabilities of such investors and, as infrastructure investments are usually less affected by stock market cycles, project bonds offer an opportunity to balance and diversify portfolios. In addition, emerging markets can offer higher yields

⁴ See "Japan's Government Pension Investment Fund eyes infrastructure", Florence Chong, ipe.com, 23 October 2017.

than more stable developed markets, making south and southeast Asia of particular interest to investors.

In the last few years there have been some notable success stories utilising bonds to fund south and southeast Asian infrastructure, although these have been primarily to fund operating power projects rather than transport or social infrastructure:

The Philippines:

In 2016, the first Asian green bonds were issued by Aboitiz Power (Pesos 12.5 billion/US\$ 252 million) to fund the operation and rehabilitation of the Tiwi Makban geothermal plant, with the bonds being backed by a credit enhancement guarantee from ADB (a concept discussed further below) to raise the overall rating to investment grade.

Indonesia:

In August 2017, PT Paiton Energy (Paiton), a major independent power producer in Indonesia, attracted domestic and international investors with its two-tranche US\$ 2 billion project bond, the largest rated amortising international project bond in Asia in nearly 20 years.

Macau:

Studio City Company Limited's 2012 bond issuance to fund a casino project in Macau is a compelling example of a "true" project bond, used to fund greenfield construction. A key feature of this bond was the use of an escrow mechanism where proceeds were retained from the issuance to service the debt during construction.

Structure for success: managing barriers to capital markets investment

However, there remain barriers to increased capital markets investment in Asian infrastructure. Bankability, construction risk, credit ratings below investment grade, and weak domestic bond markets make many projects less attractive to capital markets investors. These problems are not insurmountable, but for capital markets funding to really take hold in the south and southeast Asian infrastructure market, the right structures and strategies need to be put in place.

The first consideration is bankability. Capital markets investors, like traditional debt lenders, will look for viable projects with certainty of revenue stream. The efforts to reduce demand risk outlined above – either through an availability payment arrangement or mitigants such as minimum revenue guarantees – are essential in attracting longer term capital markets investors.

Construction risk is also key. Infrastructure projects typically have lengthy, high-risk construction periods, which can be unattractive to a capital markets investor seeking stable, predictable revenues. One solution is to use project bonds for brownfield projects or to refinance the project after completion (see, for example, the Paiton bond and the Tiwi Makban bond, mentioned above). Another option could be a corporate issuance to fund a portfolio of both operational and completion stage projects. Properly structured, project bonds can also be used to fund greenfield projects. For example, the Studio City casino high-yield bond used an escrow mechanism where proceeds were retained from the issuance to service the debt during construction, an option that can make sense for companies in certain industries or certain financing environments – which is more of a challenge for the build phase of a road project in India or a power project in the Philippines.

Infrastructure projects in emerging Asia may also struggle to achieve the credit rating required to attract capital markets investors. Certain institutional investors only have a mandate for investment grade projects and, in some jurisdictions, the requirements may be as high as requiring a local AAA rating. Many south and southeast Asian projects struggle to achieve investment grade rating due to their high level of construction risk or reliance (either through a sovereign guarantee, the procuring authority taking demand risk, or a government entity off-taker) on a government party which has a low credit rating.

A high-yield bond may be attractive, despite a lower credit rating (for example, the Greenko high-yield bond was ranked at below investment grade), particularly in the context of refinancing project debt once projects become operational. Another alternative is to use “credit enhancement”, where a third party provides a guarantee or other support to “enhance” the credit of the project. In Europe, for example, the Project Bond Initiative has provided this kind of credit enhancement since the financial crisis. Asian governments with strong credit ratings can provide credit enhancement through a sovereign guarantee (although this means that the government bears the guarantee on its books, negating some of the benefits of using private financing, and it is not an option for governments in emerging Asia with lower credit ratings). Multilateral agencies, such as ADB, may be able to step in to provide these credit enhancements, as was the case with the Tiwi Makban green bond. It remains to be seen whether such options can be deployed at scale.

Finally, the success of project bonds in south and southeast Asia may also depend on the strength of the local bond market. One of the key benefits for project sponsors of using capital markets investment is the ability to issue project bonds whose currency matches the project revenue currency. This requires a strong local bond market to fully fund the issuance. Local markets vary across south and southeast Asia: Korea, Japan and Singapore have sophisticated, established domestic bond markets, built off the back of their developed economies, established intermediary markets, rule of law, and robust bankruptcy systems. Malaysia and Thailand, though more volatile developing economies, also have strong local bond markets, primarily due to years of experience with capital markets and financing in general, as well as predictable legal systems. However, local currency bond market capability in south and southeast Asia will need to expand in order to significantly increase capital markets investment for infrastructure projects in local currency.

The future: capitalising on capital markets

While government support (such as ODA funding or G2G arrangements) and bank debt remain the primary sources of project financing in Asia, capital market investment is on the rise. Recent successful projects show a clear trend emerging: it is a case of finding the right project for the right project bond. Overcoming the construction risk factor – either by managing negative carry or reserving project bonds for brownfield projects or the operations phase – is essential. A below investment grade bond may still be viable if the yield is high, or credit enhancement is available to improve the rating. Developing the experience and sophistication of the local bond market is also crucial to providing the framework to increase capital markets investment. Ultimately,

financing through capital markets is unlikely to be the solution to all of Asia’s infrastructure funding needs: instead it should be used in combination with government support and traditional bank financing to bridge the investment gap.

Opportunities and challenges

It goes without saying that challenges remain in developing and financing infrastructure projects in south and southeast Asia. To a large extent these depend on the type of project, as well as the social, political and economic environment of the relevant country where the project is located. However, in an environment where south and southeast Asian governments continue to announce ambitious plans to expand infrastructure networks, there are numerous opportunities for developers, investors and lenders. The fact that authorities in Asia are increasingly utilising alternative structures to fund projects – whether through the adoption of blended financing, hybrid PPP models or accessing funds on the capital markets – is helping to accelerate much needed infrastructure development in Asia. Ultimately, though, what is needed to attract the widest pool of financing is the oft-repeated refrain of a pipeline of bankable projects. The more frequent adoption of a viable revenue risk allocation is a positive sign that governments are adopting a more viable risk allocation overall. Sponsors, financiers, governments and the populations of Asia are watching the latest initiatives in infrastructure development in the region with great interest. If success comes, it may herald a new momentum for Asian infrastructure development and provide real progress in narrowing the region’s infrastructure gap.



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CHOCKS AWAY!:

Privatisation of Aéroports de Paris gets ready for take-off

By Michel Lequien and Jacques Dabreteau

In France, the privatisation of transport infrastructure can prove challenging, as was the case in 2005-2006 when there were heated political exchanges over the rationale behind the privatisation of France's state-owned motorway concessionaires and the valuation put on them. Therefore, when preparing to privatise Aéroports de Paris (ADP), the "jewel in the crown" of the French airports sector, the Government has designed a strict organisational and regulatory framework whose aim is to guarantee that the State maintains tight ownership and operational control over ADP while, at the same time, maximising the privatisation proceeds.

The privatisation of the French airport sector is an ongoing process. As is the case for any key infrastructure, the process is slow but it is moving forward. The regional airports at Toulouse-Blagnac, Nice Côte d'Azur and Lyon-Saint Exupéry have all been partly privatised (in 2015, 2016 and 2016 respectively). Marseille Provence airport and Bordeaux-Mérignac airport are on the starting blocks, slated to come on the market in the course of 2019. It is now the turn of ADP to come on the market, possibly as soon as Q2 2019.

ADP comprises Roissy-Charles de Gaulle airport (CDG), Orly airport (Orly), Le Bourget airport, ten further smaller aerodromes around Paris and one heliport. ADP also owns and operates a number of other airports around the world (e.g. in Jordan (through ADP International SA) and in Turkey (through TAV)). Aggregate traffic volume for CDG and Orly was 102 million passengers in 2017 and

50 million in H1 2018.¹ ADP is listed on the Paris Stock Exchange and has a market capitalisation of approximately EUR 18 billion.

The French State, which still owns 50.63 per cent of the capital and 58.5 per cent of the voting rights of ADP,² has now formulated its detailed position on the organisational and regulatory model to be adopted for the privatisation of ADP in a bill (the "Bill") which was presented to Parliament on 19 June 2018, and titled the bill "*for the growth and transformation of enterprises*".³ Parliamentary discussion

1 See <https://www.parisaeroport.fr/en/homepage-group>.

2 The remaining share capital is held by Vinci (8%), Royal Schiphol Group (8%), Predica (5.1%), employees (1.9%) and other institutional and individual investors (26.4%).

3 Projet de loi relative à la croissance et la transformation des entreprises submitted to the National Assembly by the Prime Minister and the Minister of the Economy on 19 June 2018 and also called "projet de loi Pacte".

of the Bill began on 5 September 2018 and the relevant provisions of the Bill (articles 44-50) were adopted by the National Assembly with limited amendments on 3 October 2018. In the coming weeks, the Government will also have to determine the strategy to be adopted for the privatisation and, in particular, whether to dispose of all or just part of its holding in ADP, as well as selecting the privatisation method (i.e. a sale to one or more strategic investors, and/or a flotation for the benefit of smaller investors).

As a major player in both the French and the international airports markets, ADP's capital structure, organisation and regulation are particularly complex and substantially different from those of the regional airports.

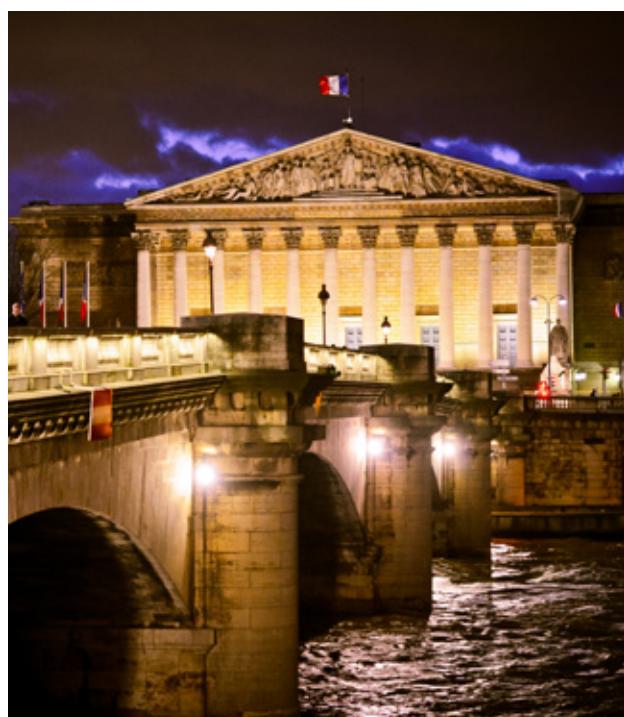
The initial shareholding of major regional airport companies (*Sociétés aéroportuaires régionales* or SARs) comprises the State (60 per cent), local chambers of commerce (CCIs) (25 per cent) and local authorities (15 per cent). The "privatisation" of a regional airport essentially involves the State selling all or part of its 60 per cent stake, as was the case for Toulouse airport,⁴ Nice airport⁵ and Lyon airport.⁶

The situation is very different for ADP. Unlike the regional airports, the current structure of ADP is not deemed suitable for privatisation. In addition, by law, the majority of ADP's capital must be held by the State, which means that the law will need to be changed to enable the privatisation of ADP to go ahead. Indeed, the precise purpose of articles 44-50 of the Bill is to authorise the privatisation, once a substantial restructuring and reorganisation of ADP has taken place.

4 Sale of 49.9 per cent to Chinese consortium CASIL.

5 Sale of 64 per cent to Azzura Aeroporti formed of Atlantia and EDF Invest. The Principality of Monaco has recently acquired 12.5 per cent of the capital of Azzura Aeroporti.

6 Sale of 60 per cent to a consortium formed of Vinci Airports, la Caisse des dépôts et consignations and Predica.



Key issues raised by the proposed privatisation of ADP

As mentioned above, ADP is a complex asset. Even though the French Government may no longer deem ADP to be a "strategic enterprise" which must remain in State ownership, it is nonetheless considered by the Government to be "*an important asset*", which cannot be privatised in its present state.

The particular issues which need to be addressed in order to prepare ADP for privatisation include the following:

- **State ownership requirement.** The legal limitation set out in article L. 6323-1 of the Code of Transport, which requires the majority of the capital of ADP to be held by the State will need to be removed.
- **Unbundling of Paris airports?** Should ADP be retained as a group operating all of the main airports in the Paris region, or should the group be unbundled and CDG and Orly airports privatised separately?
- **Asset ownership regime.** An arrangement needs to be put in place to ensure that ADP's airport and non-airport infrastructure assets, as well as the substantial land reserves which it currently owns, remain in some form of public ownership so that they cannot be freely disposed of by ADP after privatisation, while at the same time maintaining the value of ADP at the time of privatisation and over the longer term.
- **Which airport regulation system should be adopted?** Should the "dual-till regulation" (*système de double-caisse*) system be maintained or should there be a move to "single-till" regulation whereby profits derived from airport commercial activities (i.e. car parking, car rental services, food and beverages, duty-free shopping, etc.) may be used in addition to the infrastructure charges charged to airlines to cover the fixed cost of the airport's aeronautical services?

Key features of new regulatory regime as set out in the Bill

As mentioned above, the French Parliament began discussing the Bill on 5 September 2018. Most of the 73 articles in the Bill address issues other than ADP. Therefore, parliamentary discussions will take time and it is not anticipated that the Bill will be adopted before the beginning of 2019. The contents of the Bill have already been amended during parliamentary debate, e.g. to provide a right for regional local authorities (*Île de France, Oise*) to acquire shares in ADP, but we anticipate that the largely "technical" provisions set out in articles 44-50 which relate to ADP will not be subject to substantial further alteration.⁷

The Bill removes the current requirement for the majority of ADP's capital to be held by the State. It creates an "exclusive right to operate" (*droit exclusif d'exploitation*) for a period of 70 years in favour of ADP, thereby triggering a substantial restructuring of ADP's asset ownership regime. It also maintains the dual-till regulation regime currently in use, under which the profits derived from commercial activities at ADP airports are not integrated with the income from airport charges.

7 The online version of this article will be updated should this be the case. See www.ashurst.com and search for "InfraRead".



State ownership no longer required

The Bill provides that article L. 6323-1 of the Code of Transport (which requires that the majority of ADP's capital is held by the State) is removed, and article 49 of the Bill expressly authorises “*the transfer of the majority of the capital of the company Aéroports de Paris to the private sector*”.

The Bill does not provide for the unbundling of ADP's airports: CDG and Orly will not be sold separately and ADP is to remain the sole operator of all airports and aerodromes in the Paris region (*aéroports franciliens*).

The Bill does not set out the method and detailed terms of the privatisation. It requires, however, that, during the privatisation process, the Minister of the Economy and the minister responsible for civil aviation “remind” the candidates of the public service obligations (*obligations de service public*) to which ADP is subject, and of the possibility that the State may impose a lock-up period for shareholders in the privatised ADP.

Although the State is intending to privatise ADP as a company, it is important to point out that it is not intending to effect a once and for all “privatisation” of the right held by ADP to operate the Paris airports. Therefore, the Bill provides that the sale by the State of its shares in ADP does not include the irreversible transfer of ADP's current right to operate the airports; in other words, following the restructuring provided for in the Bill, the privatised ADP will no longer benefit from a perpetual right to operate the Paris airports.

ADP granted exclusive but temporary right to operate Paris airports

The Bill reorganises the legal regime of ADP's airports and related assets to ensure that “*public ownership rights over assets that are essential for the public service*” are secured after privatisation.

This involves a fundamental change in the legal basis of ADP's right to operate the relevant airports.

Under the Bill, ADP will no longer operate the French airports that are owned by it in perpetuity, as is currently the case: instead it will be granted by law an exclusive right to operate these airports

for a period of time limited to 70 years. Upon expiry of the 70-year period of operation (*période d'exploitation*), ADP will have to transfer ownership of its assets (other than its international airport assets)⁸ to the State, on receipt of appropriate compensation determined in accordance with the terms set out in the Bill.

As it currently stands, the State is under a statutory obligation to maintain majority ownership in ADP, and therefore the fact that the airports, characterised in law as “public infrastructure” (*ouvrages publics*),⁹ are fully owned by ADP has not been an issue, particularly since the State has the right to oppose the sale of (or the granting of security over) ADP's public service assets,¹⁰ meaning that there was no risk that the State could ever lose ultimate ownership of these public assets.

The “exclusive operation right” granted to ADP under the Bill is designed to maintain ultimate State ownership over the assets operated by ADP once it becomes a privately held company, both for the duration of that exclusive operation right and following its expiry.

The “exclusive operation right” created by the Bill is a new, ad hoc right, for which there is no precedent under French law. One of the reasons for adopting this complex solution, rather than a more typical arrangement based on the State granting a public service concession (*concession de service public*) for the operation, maintenance and development of the airports is that the State would first have had to acquire the airport and non-airport assets currently owned by ADP before tendering and granting a concession for the operation and development of those assets. In view of the valuation of ADP and the legal complexity and timeline of such an acquisition and tendering process, this was not deemed to be an option. More importantly, this would not have allowed the State to extract value from the privatisation of ADP itself.

⁸ Article 44 of the Bill which amends article L. 6323-2-1 of the Code of Transport. The purpose of the carve-out of ADP's international airport operations is to limit the compensation payable upon termination of the 70-year operation period – see further below.

⁹ Art. L. 6323-5 of the Code of Transport (*Code des transports*).

¹⁰ Art. L. 6323-6 of the Code of Transport.

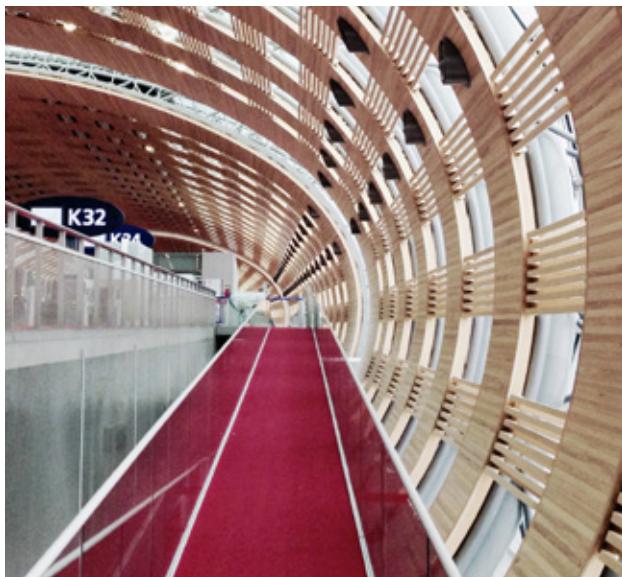
The detailed terms and conditions governing the exclusive operation right granted to ADP, and its performance of the public services relating to the operation of airports (*service public aéroportuaire*), are to be set out in “operational specifications” (*cahier des charges*) produced by the State. ADP’s airport public service activities are currently already regulated in a *cahier des charges*, but the new *cahier des charges* to be created under the Bill will be substantially more developed and will grant the minister responsible for civil aviation more extensive control over ADP’s compliance with the public service obligations associated with the exclusive right to operate the airports.¹¹

Among other requirements, the *cahier des charges* will set out key performance indicators (*niveaux de performance*) and sanctions for non-compliance (penalties, termination), as well as specifying the circumstances in which the State may require ADP to carry out certain investments or authorise a change in the control of ADP. In addition, it will set out certain specific procurement rules applicable to ADP as well as including a right for the State to regulate and authorise any substantial modification affecting the capacity of the airports. It will also contain a right for the State to have approval rights over the appointment of ADP’s key managers.

The State will also have the right to monitor the disposal of, or the granting of security over, ADP’s key assets. Any such disposal will be authorised by the State to the extent that it does not adversely affect ADP’s performance of its public service obligations over the entire 70-year operation period.¹² In particular, ADP is not permitted to grant security over land and buildings which are required for the performance of public service obligations, nor may such land or buildings be the subject of commercial leases (*baux commerciaux*). These provisions give the State the power to prevent the granting of security over, or the disposal by ADP of, its substantial land reserves (*réserves foncières*) if the State considers that such a disposal or granting of security would not be compatible with the future development of ADP’s public service obligations (e.g. the development of new runways at CDG and/or Orly, in particular).

11 Article 45 of the Bill.

12 Article 46 of the Bill.



In addition to the *cahier des charges* imposed by the State, ADP and the State will enter into a negotiated “economic regulation contract” (*contrat de régulation économique*), whose purpose is essentially to regulate the level of airport charges for the use of aeronautical infrastructure during the contract period, whose maximum term will be five years. In the absence of agreement on the terms of the renewal of the economic regulation contract, the Government will be entitled to determine the amount of the charges by decree.

On termination of ADP’s exclusive right of operation (whether at the end of the 70-year operation period or upon earlier termination for breach or in other similar circumstances set out in article L. 6323-1.II of the Code of Transport), ADP’s assets will be transferred to the State in accordance with the terms of the *cahier des charges*.

State compensation for limitation of ADP’s right to operate the Paris airports

Under the legal regime created by Law N° 2005-357 of 20 April 2005, ADP was granted the right to organise, operate and develop CDG, Orly, Le Bourget and the other Paris airports indefinitely. Subject to the right of the State to oppose the sale of airport assets required for the performance of the public services, ADP enjoyed full and unlimited ownership of the assets entrusted to it pursuant to the terms of the Law. As mentioned above, this was not considered to be an issue for so long as the State was required to retain a majority interest in ADP.

However, the proposed change in the legal regime applicable to ADP’s public service assets and the granting of a temporary right to operate the Paris airports, as provided in the Bill, will effectively result in the expropriation of ADP. It will adversely affect the valuation of ADP (which is a listed company) and will therefore have significant financial implications for ADP and its current shareholders. ADP therefore needs to be indemnified for this loss of future revenue in accordance with the Constitution.

The Bill sets out detailed (and complex) arrangements for the calculation and payment of financial compensation by the State to ADP in respect of ADP’s loss of future revenues as a result of the restructuring and, in particular, the time limitation placed on ADP’s right to operate the airports in the future.

The Bill provides that ADP will be indemnified for the (future) transfer of its assets at the end of the operation period as follows:

- (a) **on the date of privatisation:** payment by the State to ADP of an amount equal to the present value of ADP’s (future) after-tax cash flows following the term of the operation period (70 years) using a discount rate equal to ADP’s weighted average cost of capital as determined at the date of the transfer of ADP to the private sector (ADP’s WACC) *minus* the (estimated) net book value of ADP’s assets at the end of the operation period actualised using ADP’s WACC; and
- (b) **on transfer of ADP’s assets (other than its international airports operations) at the end of the 70-year operation period:** payment by the State of an amount equal to the (actual) net book value of ADP’s assets at the end of the operation period.

The above amounts will be determined by the Minister of the Economy, with the assent of the *Commission des participations et transferts*, an independent authority set up under France’s privatisation laws.



The determination of ADP's net present value under (a) above is especially complex as it applies to a period of time that is particularly remote (starting in 70 years) and is determined with respect to an unlimited period of time after the end of the operation period. In its opinion (*avis*) on the Bill, the State council (*Conseil d'Etat*), acting in its State advisory capacity, points out the difficulties and uncertainties of the proposed calculation, but ultimately concludes that it is compliant with the constitutional principles governing the valuation of public assets transferred to the private sector (*entreprises transférées du secteur public au secteur privé*).

The proposed 70-year term of ADP's exclusive operation right was determined by taking several factors into consideration, in particular the fact that ADP is a listed company whose long-term stability must not be adversely affected by the restructuring triggered by the privatisation, as well as – from the State's perspective – the reduced budgetary impact (in terms of the indemnity payments owed by the State to ADP) resulting from setting a longer term for exclusive operation.

Preservation of dual-till regulation model

The Bill preserves ADP's current business model by maintaining the dual-till regulation system currently in operation.

This model has been criticised by airlines, who generally prefer the single-till model, where the profits derived from an airport's commercial activities are integrated with the revenues derived from its aeronautical services, thereby lowering airport charges paid by the airlines.

There was little doubt, however, that in the context of the privatisation, the profitable dual-till regulation model would be maintained.

Under the Bill, airport charges paid by airlines (*redevances aéroportuaires*) are required to provide a fair remuneration (*juste rémunération*) to ADP. The charges are to be determined by reference to the weighted average cost of all airport infrastructure services, including parking and public transport services, which are provided by ADP.¹³ The charges are regulated by means of a five-year "economic regulation contract", as described above.

ADP's other revenues will not be taken into account in determining the aeronautical charges. It may therefore set the prices for all commercial activities and services at its airports (e.g. shops; restaurants; banking and currency exchange services; hotels; car rental; advertising; etc.), as well as any property development or other activities carried on outside the airports.

Conclusion

The French Government expects to "cash in" substantial amounts from the privatisation of ADP which is to be used to finance a new State Fund aimed at supporting and financing innovative technological projects (*fonds pour l'innovation et l'industrie*). The privatisation of France's major airports is a highly sensitive matter politically, and not just a financial transaction. The process will therefore come under very close scrutiny and the Government will have to demonstrate that it is not disposing of an emblematic (and very profitable) infrastructure asset at a bargain price, a criticism levelled at the Government at the time of the privatisation of the French motorway concessions in 2005-2006. This explains why the Bill is proposing such a strict organisational and regulatory framework, maintaining close ownership and operational control over ADP and its airports. As onerous as it might seem, the system which is being put in place is not unknown to operators familiar with French infrastructure concessions and nor is it likely to be a deterrent for international operators and infrastructure investors. One interesting point will be to see whether the State, post-privatisation, actually has the capacity to properly exercise its monitoring and control powers over ADP in the long term.

A number of candidates have already expressed an interest. These include Vinci, which is already an anchor shareholder in ADP and which is expected to team up with partners, as well as two consortia led by US fund Global Infrastructure Partners (GIP) and Australian infrastructure fund IFM respectively. Italian infrastructure group Atlantia is also regularly mentioned as a possible candidate and several other consortia are also expected to throw their hats into the ring.

The interest is clearly there: the Government must now decide the strategy it intends to follow for the privatisation.

¹³ Article 47 of the Bill which amends article L. 6323-4 of the Code of Transport.



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INVESTING IN SAUDI ARABIA:

Key areas of Saudi law and dispute resolution

By Dr Faisal Baassiri, Dyfan Owen and James MacDonald

With an estimated US\$1.4 trillion worth of major projects in the pipeline and Saudi Arabia looking to increase private sector participation, there are significant opportunities for infrastructure investors. However, prior to making an investment, it is critical that investors understand the legal landscape and the risks involved.

Transformational economic and social infrastructure development is at the forefront of Saudi Arabia's "Vision 2030", the Saudi government's road map for diversifying its economy and addressing the challenges brought by low global energy prices.¹ SAR54 billion (US\$14.4 billion) has been allocated for infrastructure and transport in Saudi Arabia's 2018 budget, an increase of SAR25 billion (US\$ 6.7 billion) on the previous year. It is estimated that there are US\$1.4 trillion worth of major projects planned or under way in Saudi Arabia, with numerous projects expected across key sectors, including housing, healthcare, education, transport and renewables.

This article provides a high level overview of some of the key areas of Saudi law and dispute resolution, which will be very relevant to those considering investing in infrastructure in Saudi Arabia.

The role of *Shari'ah* in the legal system

In Saudi Arabia the *Shari'ah* is the supreme source of law. The *Shari'ah* principles are drawn primarily from the Holy *Qu'r'an* (the divine revelation to the Prophet Mohammed) and the *Sunnah* (a record of the sayings and actions of the Prophet Mohammed). The

application of the *Shari'ah* to commercial law in Saudi Arabia is also influenced by Islamic schools of Sunni jurisprudence, primarily the *Hanbali* school and its rules of juristic interpretation.

In addition to the *Shari'ah*, Saudi Arabian law also consists of promulgated laws. Promulgation occurs in various forms, the most common of which are royal orders, royal decrees, council of ministers resolutions, ministerial resolutions and circulars, department circulars and announcements of official bodies of the Saudi government having the force of law. All promulgated laws are ultimately subject to, and may not conflict with, the provisions of the *Shari'ah*. Most (but not all) promulgated laws are published in *Umm Al-Qura*, the official gazette of Saudi Arabia.

In terms of the development of Saudi law, it is important to note that there is no doctrine of binding precedent in Saudi Arabia. In addition, court judgments have traditionally not been published and this allows each judge further discretion in interpreting what is – and what is not – in accordance with Saudi law. This can make the outcome in court proceedings unpredictable. However, in an effort to increase predictability and the transparency of case law, judgments of the courts have recently begun to be made publicly available on a more regular basis. Even so, it should be noted that such published case judgments are merely for guidance and do not bind judges.

¹ For further details on Saudi Arabia's Vision 2030, see the article "Public Private Partnerships and the New Economy: the changing face of the Saudi infrastructure market" in issue 11 (April 2018) of InfraRead. See www.ashurst.com and search for "InfraRead".



Contract law

General contract law

There are many areas of law that are not regulated by any promulgated law, including contract law. Unlike its Gulf neighbours, which have written civil codes that were heavily influenced by the first Egyptian Code, contract law in Saudi Arabia is regulated by *Shari'ah* principles. Some of the key Saudi contractual principles are set out below.

One of the key principles is freedom of contract. Parties are generally free to contract on their own terms, subject to the contract being for a lawful purpose and being compliant with other *Shari'ah* principles (e.g. contractual clauses providing for the payment of interest will be void as the payment of interest is contrary to *Shari'ah*).

Under Saudi law a contract is formed by the exchange of offer and acceptance by parties with legal capacity to contract. There are no formal requirements for the execution of a contract. However, to avoid the signing of a contract becoming contentious (e.g. if a party denies signing the contract), it is best practice to have the signatures witnessed by two adult male Muslims, or one adult male Muslim and two adult female Muslims, or four adult female Muslims all being over the age of 18.

Saudi law accords very great respect to the parties' contract. The contract is considered the "law of the parties" and parties must fulfil their contractual obligations ("O you who believe! Fulfil the contracts"; *Quran Al-Ma'idah 5:1*). However, parties must also perform their obligations in accordance with the principle of good faith, and a Saudi court will take into account the overriding principle of "fairness" when determining a contractual dispute. This could, for example, result in effect not being given to a limitation of liability provision in circumstances where a counterparty's loss is far greater than the contractual limitation.

The principle of *Gharar* (i.e. speculation or uncertainty) is also very important. It provides that a contract may be invalid, or partly invalid, if a provision gives rise to uncertainty (e.g. where the drafting is inconsistent or ambiguous). The application of *Gharar* is one of the most debated issues in Islamic law. Generally, for a contract to be valid, all fundamental terms of the contract such as the existence of the subject matter, its availability, the quantities involved, its price and the time of delivery must be absolutely certain at the outset. However, contracts for the construction or manufacture of an object to be delivered at a future date, known as *Istisna'*, are permitted.

Parties are generally not able to terminate a contract for a reason not mentioned in the contract. However, if a court or tribunal deems that there was a valid cause for termination, then the termination may be valid in certain circumstances even if the cause was not expressly mentioned in the contract. There is generally no "specific performance" remedy or injunctive relief under Saudi law. Therefore, a party's remedy for wrongful termination is normally limited to damages, although in the case of fraud the innocent party can apply to have the contract cancelled.

A party in breach of its obligations under a contract must make good the loss suffered by the other party as a result of the breach. However, the damages that a party may recover are actual sustained damages since loss of profit or indirect losses are generally not recognised.

Government contracts

Contracts with government entities are currently regulated by the Government Tenders and Procurement Law (the GTPL). The GTPL was issued in 2006 and applies to tenders and procurements carried out by government authorities. A draft new Government Tenders and Procurement Law was released for consultation at the end of 2017 but is not yet in force. The draft law will have

wider application than the current law as it will apply to entities in which the state has a 51 per cent (or greater) stake. The current GTPL states that its terms will prevail in any case where there are provisions in a contract with a government authority that are inconsistent with the GTPL. It is therefore critical that contractors involved in government projects are familiar with the requirements of the GTPL.

A draft Private Sector Participation Law, which will regulate public private partnerships (PPPs) in Saudi Arabia, was released for consultation in July 2018. Under the proposed PPP regime, the GTPL will not automatically apply to projects covered by the Private Sector Participation Law, unless there is agreement between the government entity and private partner. A Royal Decree has also been issued and has come into force (M/101 dated 4 July 2018), which provides that contracts necessary for the execution of privatisations are excluded from the GTPL.

In addition to regulating the procurement process, the GTPL also contains provisions which may affect parties' rights and obligations during the lifespan of a project. Significantly, the GTPL places limits on changes to the value of a contract once it has been awarded and restrictions on extensions of time. Article 36 of the GTPL provides that a government authority can only increase the obligations under the contract by a maximum of 10 per cent of the contract's value and decrease the obligations by a maximum of 20 per cent. Article 52 of the GTPL provides that extensions of time can only be granted if: (i) the contractor has been required to perform additional works; (ii) works are suspended for reasons not attributable to the contractor; or (iii) annual budgeted funds are not sufficient to complete the project. It is important for contractors to be aware of these restrictions when negotiating variations to the scope of works or claims for extensions of time for such contracts.

Claims for compensation arising under a contract which is subject to the GTPL must be referred to a government committee established under the GTPL. However, the GTPL provides that the committee cannot review a claim until the final handover of works. Decisions of the committee can be appealed to the Board

of Grievances (an independent administrative judicial commission responsible directly to the King). Under the new draft GTPL, government authorities and contractors will be able to agree on arbitration as the dispute resolution mechanism and to bring claims while the works are still ongoing. Currently, permission from the King is required for government entities to agree to arbitration.

Resolution of disputes

Arbitration

There is a growing understanding of, as well as a culture of, commercial arbitration in Saudi Arabia and it is increasingly being used for the resolution of construction disputes between non-government entities.

In 2012, Saudi Arabia enacted a new arbitration law (Royal Decree No. M/34, the "Arbitration Law"), replacing the previous law that had been enacted in 1983. The new law was a major change to the arbitration landscape in Saudi Arabia and brought Saudi Arabia's arbitration law into much closer alignment with the UNCITRAL Model Law.

Under the Arbitration Law, arbitration proceedings are commenced by sending a request for arbitration to the opposing party. If court proceedings are brought in respect of a dispute which is the subject of an arbitration agreement, the court is required to dismiss the case, provided that the defendant has raised the arbitration agreement as a defence before any other claim or defence has been made.

In 2016, Saudi Arabia opened its first commercial arbitration centre, the Saudi Center for Commercial Arbitration (SCCA). The SCCA arbitration rules are based on the UNCITRAL Arbitration Rules and the International Arbitration Rules of the International Centre for Dispute Resolution. It has already had a number of cases filed in its first few years of operation, including cases with foreign parties from Germany, USA, England and France. It has over 150 arbitrators on its roster, including a mix of Saudi and non-Saudi nationals.

Saudi Arabia acceded to the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards in 1994, but it is only in recent years that there has been a growing acceptance and recognition of international commercial arbitration by the Saudi courts. This appears, in part, to be attributable to a new Enforcement Law issued in 2012 (Royal Decree No. M/53 of 3 July 2012). Prior to the introduction of the new Enforcement Law, applications for the enforcement of foreign awards and foreign court judgments were heard by the Board of Grievances. The process for enforcement was complex and would often result in a full review being undertaken of the merits of the award.

Another turning point in the enforcement of international arbitration awards in Saudi Arabia was the announcement in May 2016 that the Enforcement Court in Riyadh had held that an arbitration award rendered in London was enforceable in Saudi Arabia against a Saudi debtor. This was a US\$18.5 million award obtained by a UAE subsidiary of a Greek telecommunications company in an ICC arbitration seated in London and was the first known enforcement of a foreign arbitration award since the enactment of the new Arbitration Law and the new Enforcement Law. Since then, there have been a number of other successful enforcements of foreign arbitration awards, including two involving Japanese counterparties.





It is important to note, however, that an award of interest is unlikely to be enforced given that the concept of interest is contrary to *Shari'ah* and Saudi public policy. Under the Arbitration Law, an award is not enforceable if it violates the provisions of *Shari'ah* and public policy. However, if an award can be broken down, execution of the parts not contrary to *Shari'ah* or public policy can be ordered. Therefore, if enforcement of an award in Saudi Arabia may be required, it is important to ensure that any interest component of a monetary award is separately identified (or a separate award is issued for the interest).

Court system

Where parties have not agreed on arbitration and where jurisdiction for a particular type of dispute does not fall under another court or judicial committee, disputes are heard before the general courts of Saudi Arabia (i.e. the first instance courts, courts of appeal and the supreme court – the highest judicial authority). Examples of specialist committees include the Committee for the Resolution of Banking Disputes, and the Committee for Adjudication of Insurance-Related Disputes and Violations of the Saudi Arabian Monetary Agency.

As part of Vision 2030, Saudi Arabia has undertaken a number of reforms to its judicial system to increase efficiency and investor confidence. This has included the establishment of specialist commercial courts in Jeddah, Damman and Riyadh, as independent institutions. Prior to this, the commercial courts were a branch of the Board of Grievances, which was originally established to hear cases involving the government. Historically, there have been concerns over delays in progressing cases through the courts, with disputes potentially taking a number of years to resolve. Under a new court procedure law, however, the commercial courts are required to deal with claims more expeditiously, and first instance decisions are expected to be handed down within approximately six months of a claim having been filed.

Looking to the future

As Saudi Arabia moves towards achieving Vision 2030, there will be many opportunities for both local and international investors in the infrastructure sphere. There also appears to be a real commitment by Saudi Arabia to modernise its legal system so as to make it more attractive to investors.

The creation of independent commercial courts to deal with commercial disputes and specialist courts to deal with the enforcement of judgments and awards is a welcome development in the field of dispute resolution. There is also landmark law reform on the horizon in respect of PPPs in Saudi Arabia. All of these are significant and positive developments for investors in the infrastructure space. However, with such rapid change under way, it is important that investors obtain specialist legal advice when considering investing in Saudi Arabia and whenever contentious issues arise.



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NEW OPTIONS FOR GERMAN INFRASTRUCTURE FUNDING: First financing by institutional investors of regional passenger rail network reaches financial close

By Derk Opitz, Holger Mlynek and Alexandra Heitmann

The financing of the Ulm diesel rail network, which closed in July 2018, is the first financing in the German regional passenger rail transport sector to have been provided directly by institutional investors. Ashurst advised the investors on this innovative funding structure which may be suitable for replication in other upcoming public infrastructure deals in Germany.

Regional passenger rail transport in Germany

The regional passenger rail transport sector in Germany (*Schienennpersonennahverkehr*, SPNV) has been fully liberalised, enabling privately-owned train operating companies (TOCs) to compete with the incumbent state-owned operators. Given that, in general, regional public passenger transport is not set up to be self-funding through passenger receipts, the German Federal Government (via the local public transport authorities (PTAs) of the Federal States) provides financial support to regional public passenger transport (so-called "regionalisation funding"). In order to provide a level playing field for competing TOCs during the tender process, the PTAs provide financial support for the financing of the acquisition of rolling stock, particularly when the PTA requires the TOCs to use new rolling stock rather than the rolling stock which is currently being used on that particular network. This is because the PTAs want potential TOCs to compete on the basis of providing better services to passengers rather than on the basis of their funding terms, and providing financial support for

the acquisition of rolling stock takes the financing terms out of the equation. If that were not the case, the state-owned TOCs would have a considerable competitive advantage over the privately owned ones. For example, Deutsche Bahn AG, Germany's leading train operating company, is 100 per cent owned by the German Federal Government and therefore benefits from the AAA rating of the Federal Government. Deutsche Bahn AG could theoretically finance its operations on the capital markets under German public bond conditions (i.e. at a coupon close to zero).

A peculiarity of the German SPNV is driven by European regulation and the specifics of the German market for rolling stock. Under European procurement rules, the concession period for regional passenger rail transport services in Germany is, in principle, limited to a maximum of 15 years – whereas the typical operating life of the rolling stock used for public transport is between 25 and 35 years depending, in particular, on the traction system adopted. As there is no secondary market for used passenger rolling stock in Germany, a bidder for a concession faces significant residual

value risk, i.e. the risk that, if the bidder does not win the bid for the subsequent concession period, it will be left with a fleet of rail vehicles it can no longer use (even though the rolling stock can technically still be used for another 10 to 20 years) and which it is unable to sell. However, most of the 26 German PTAs support the financing of new rolling stock in a way that deals with the residual value risk and provides comfort for the financiers, as will be explained below.

Dieselnetz Ulm

Following a competitive bidding process, in February 2018, *Bayerische Eisenbahngesellschaft mbH* (BEG), the PTA of the Free State of Bavaria, selected DB Regio AG (DB Regio), a 100 per cent subsidiary of Deutsche Bahn AG, to operate regional passenger transport services on the diesel rail network around the Bavarian city of Ulm (Diesel Network Ulm or DNU) for a concession period from December 2020 until December 2032. The tender documents required the TOC to operate the passenger services using newly purchased diesel multiple-units (DMUs).

There is no uniform approach in Germany to the type of financial support provided for the acquisition of new rolling stock for regional public transport systems. In fact, each of the 26 PTAs has its own distinct approach. The BEG decided to support the financing of the acquisition of the new DMUs in Ulm with a redeployment guarantee in combination with a waiver of counterclaims.

Redeployment guarantee

Under a redeployment guarantee the PTA guarantees the funders that it will require the TOC which is awarded the contract for the **subsequent** concession period to use the same DMUs on the same terms as for the **first** concession period. In other words, the PTA guarantees the use of the DMUs for approximately 25 years. This therefore allows funders to put in place financing arrangements whose term matches the operating life of the rolling stock.

Waiver of counterclaims

A waiver of counterclaims can be described as follows: (i) the PTA allows the TOC to assign to the funders the fixed element of the payments due to the TOC under the payment mechanism for operating the passenger services (i.e. the element relating to the

funding costs of the rolling stock financing); and (ii) vis à vis the funders, the PTA waives any counterclaims it may have against the TOC in relation to such assigned portion. The effect of the waiver of counterclaims is that, even in the case of a default by the TOC of its obligations to the PTA under the concession, the funders are still paid out. If the performance of the TOC deteriorates to the extent that the PTA is required to terminate the concession, the PTA would replace the TOC and require the new operator to assume the financing arrangements. In this way, project termination risk is taken away from the funders, who can rely on the **solvency of the PTA instead of the TOC** when assessing the likeliness of payment default.

The BEG, however, is set up as a private limited company owned by the Free State of Bavaria. A claim for the assigned payment, therefore, would not be a direct claim against a public body – a significant factor in the resulting financial solution, as will be explained below.

Financing environment for regional passenger rail transport in Germany before DNU

European and German policy has been attempting, for a number of years, to support the financing of infrastructure by institutional investors. For instance, Solvency II (the regulatory regime which has applied to insurance companies in Europe since 2016) introduced the concept of “qualified infrastructure”, privileging investment by insurance companies in public infrastructure. At first glance, financing German regional passenger rail transport looks like the perfect investment for long-term and risk-averse investors such as life or health insurers, given its long-term and low-risk profile. Notwithstanding this fact, until DNU closed, there had never been a financing by institutional investors in this area. The reasons for this were three-fold:

Firstly, the financing of German regional passenger rail transport was the domain of the German semi-state-owned banks (*Landesbanken*). The Landesbanken were able to purchase an assigned payment claim against a PTA under a receivables purchase agreement and issue a covered bond backed by the claim against a public body. Even though no public bond exists covering the full length of rolling stock financings, the banks offered the TOCs public bond conditions for the entire term, thereby outpricing other financing sources.

Secondly, the Solvency II definition of qualified infrastructure does not explicitly include rolling stock. Therefore, at least until now, it had been the prevailing view among insurance companies that rolling stock did not qualify as infrastructure within the meaning of Solvency II.

Thirdly, and most importantly, until DNU there had been no market precedent for a financing of rolling stock by insurance companies. Usually a bid is awarded between two and three years before the commencement of operations as the supply of a mid-sized fleet of vehicles takes approximately two years. Therefore, on average, the TOC has a maximum of six months to put its financing arrangements in place in order to be able to start the construction process in time. Against this background, the smaller, privately-owned TOCs in particular were hesitant about taking on the transactional risk and relying on insurance companies as counterparties, given that, at least in Germany, insurance companies have very limited experience of rolling stock financings.



DNU – a chance to try something new?

For Diesel Network Ulm the conditions were ripe for a new financing structure. Given that BEG is a private company, the assigned payment claim against the PTA would not qualify as a direct claim against a public body and, therefore, would not be eligible for a public bond. Hence, the semi-state-owned banks were not able to offer a covered bond financing for DNU.

In addition, DB Regio, the selected train operating company, knew that it would be able to rely on the financial strength of its parent company, Deutsche Bahn AG, if the finance deal had not completed in time and thus was willing to take the transaction risk. The DNU project provided an opportunity for DB Regio and its parent company to test a new funding model for railway infrastructure projects and to tap a new funding source in a highly competitive market. For the insurance companies the deal was an opportunity for them to gain a foothold to a new market.

As stated above, regional passenger rail transport in Germany is typically financed through the purchase of the assigned payment claim against the PTA by the financiers under a receivables purchase agreement (RPA). One of the reasons for choosing an RPA (rather than, for example, a loan) is that a loan governed by German law can be repaid without premium or penalty after 10 years, irrespective of whether the contractual term is longer than 10 years. Under Solvency II, however, insurance companies are limited in the type of investments they may make. An insurance company can only, as a direct investment, invest in loans, bonds or equity stakes: a financing by way of an RPA is not possible. Therefore, DB Regio had to implement a structure that has never been used before for SPNV transactions. Institutional investors offered new opportunities as an investor category, but on the other hand, the transaction had to meet further stringent criteria such as, in particular, the security principle laid down in § 124 (1) No. 2 of the German Act on the Supervision of Insurance Undertakings (*Versicherungsaufsichtsgesetz* – VAG).

Financial Close after three months

DB Regio instructed Joh. Berenberg, Gossler & Co. KG (Berenberg) to arrange a financing by way of a project bond with the insurance companies. Berenberg selected Ashurst LLP (Ashurst) as legal advisers to the investors, because Ashurst combined experience of project bonds on the one hand with sector knowledge of the regional passenger rail transport market on the other. In 2016, Ashurst's project finance team advised on the first German law project bond in the market (for the financing of the German A6 motorway PPP project). In the regional passenger rail transport market, Ashurst has a long track record of advising financiers and has particular experience of the financing of rolling stock in the Free State of Bavaria with the BEG as PTA.

The group of investors arranged by Berenberg consisted of German pensions funds and life and health insurers represented by their asset managers MEAG (acting for DKV Deutsche Krankenversicherung AG and ERGO Lebensversicherung AG) and Talanx (acting for HDI Pensionskasse AG and neue leben Pensionskasse AG).

Ashurst chose registered notes (*Namensschuldverschreibungen*, NSV) a favoured investment instrument often used by insurance companies but new to DB Regio.



Despite the fact that, for both the TOC and the insurance companies, the project represented a departure from well-trodden paths, financial close was achieved in less than three months.

Going forward

DNU has opened up a new financing source for TOCs active in the German regional passenger rail transport market and a new market segment for insurance companies. The long-term and stable cash flow generated, and the low-risk nature of the investment, may prove to be a perfect match for insurance companies.

The Hannover suburban railway network and the regional train network around Berlin (the Elbe Spree network) are currently out for tender, as are a number of others. Hannover and Elbe Spree rank among the largest concessions to have been tendered since the liberalisation of the SPNV. In both cases the financing is also supported by a redeployment guarantee and it is not clear whether the financings would be fully eligible for a public bond financing. The DNU transaction has shown that a financing with institutional investors in this sector is possible and has provided a market precedent. This increases the financing options for TOCs and may enable institutional investors to take a role in two of the largest infrastructure projects in Germany this year.



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WASTE-TO-WEALTH INITIATIVES:

Have we reached a tipping point?

By Michael Harrison, Richard Guit, Ratha Nabanidham and Mark Disney

Some observers hold the view that we are now reaching, or have already reached, a "tipping point" in awareness about plastic waste, and its long-term impact on the environment and public health. In many ways, broader awareness is catching up with policy. In making purchasing decisions as to "plastic bottle versus can or glass bottle", more aware purchasers are increasingly able to take the decision based on the possible ultimate destination of the plastic bottle, or the can or glass bottle, once its contents have been consumed. This level of awareness helps support sustainable environmental and public health outcomes.

In this article, we consider: (i) a range of waste projects that take waste (including plastics), and sort, process and treat that waste; (ii) the necessary policy settings to allow those waste projects to be developed; and (iii) the key risks that need to be addressed – either through government policy or contractual mechanisms – to make waste projects economically viable and sustainable. A previous article in the "Waste-to-wealth initiatives" series¹

considered waste-to-energy and, consequently, this is not a focus of this article.

In our most recent article, "*Waste-to-Wealth Initiatives – Examining Policy Settings in Asia-Pacific*" we noted that this article (the fourth in our "Waste-to-Wealth Initiatives" series) would focus on waste projects, including material recovery facilities (MRFs), mechanical and biological treatment facilities (MBTs), mechanical treatment facilities (MTFs), organic recovery facilities (ORFs) and food and garden organics facilities (FOGOs). Our fifth article will outline the more frequently-used policy levers in Europe, the Americas and Africa.

MRFs are the most numerous category of waste projects around the world, with recyclables being delivered to them, whether by governments or municipalities or by those who have

¹ To view all the articles in the series, go to www.ashurst.com and search for "Waste-to-Wealth". The first article in the series (Waste projects: waste-to-wealth initiatives) provided an overview of waste projects generally, including material recovery, mechanical processing and treatment, mechanical and biological processing and treatment and organics recovery, processing and treatment. The second article (Waste-to-wealth initiatives: waste-to-energy projects) explained the various technologies used for waste-to-energy projects, as well as considering the key revenue streams and key risks.



collected recyclables. As a general statement, MBTs and MTFs are able to accept a broad range of waste, and to sort recyclables using mechanical technology, producing products (typically compost, but also fuel from waste (FfW)) using biological and mechanical technology. ORFs and FOGOs are able to accept organic waste, and use mechanical technology and biological processes to produce compost and mulch.

As is illustrated by the Waste Management Hierarchy in Figure 1, the waste projects detailed in this article are considered to facilitate more favorable Waste Management Hierarchy outcomes than landfill and waste-to-energy projects.

Policy, Policy, Policy – Separation, Collection & Delivery and Payment

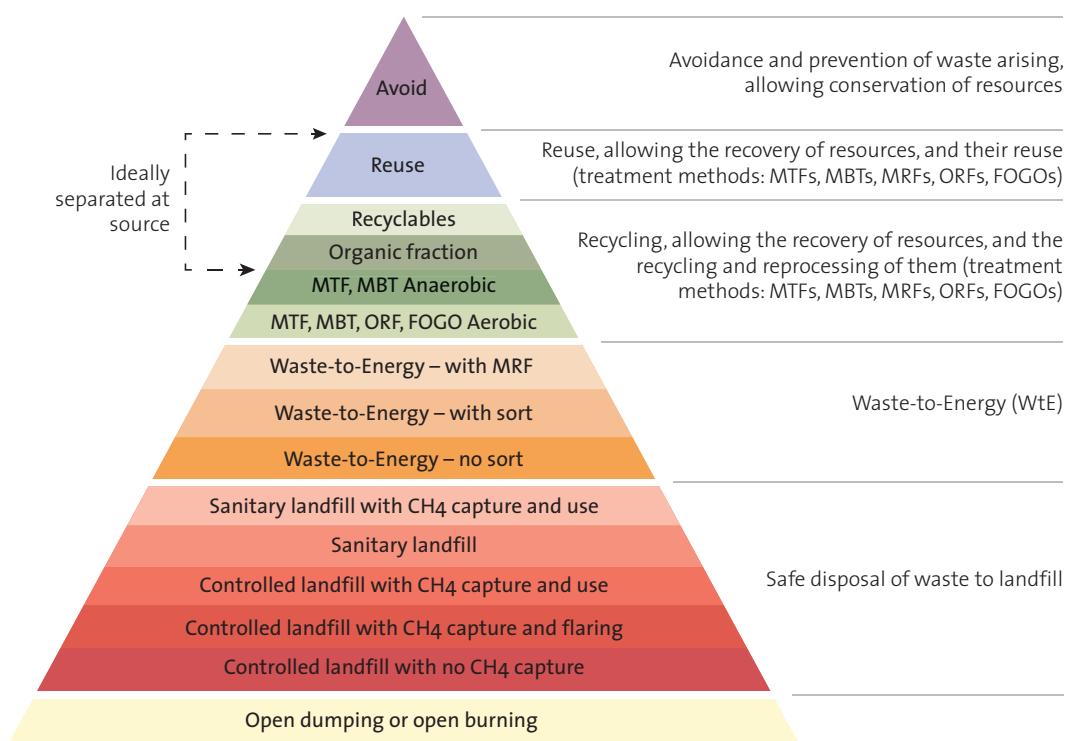
As was noted in our most recent article, policy levers are critical to the regulation of landfill and for diverting waste from landfill. It is no exaggeration to say that policy is to waste projects what location is to real estate.

For waste to be diverted from landfill in an effective manner, it helps greatly if governments and municipalities:

- facilitate or require source separation or source segregation of waste (**separation at source**);
- collect separated/segregated waste (**source separated waste**) for delivery to the appropriate waste project; and
- pay the appropriate waste project (MRF, MTF, MBT, ORF or FOGO) to sort, process and treat that waste in order to derive recyclables or produce products, or both.

We now consider each of these elements in turn.

Figure 1: The Waste Management Hierarchy



Separation at source

In jurisdictions with more developed waste collections systems, waste is collected from households and businesses using a bin or bins provided by the government or the municipality. The number of bins used and the fraction of the waste stream for which each is used will reflect the policy (and funding) of the government or municipality providing them.

The use of a single bin will allow waste collected to be delivered to landfill, an MBT or MTF (depending on the technology used at the facility) or to a waste-to-energy facility.

The use of a dual bin system, with one bin for mixed waste (non-separated, red-top bins²), the other bin for recyclables³ (yellow-top bins⁴) allows waste to be separated⁵ at source and to be collected separately so that it is capable of being delivered to landfill, an MBT or MTF (or to a waste-to-energy facility) and, in the case of yellow-top bins, a MRF.

The use of a three bin system, with the third bin being for garden organics or food and garden organics (green top bin), allows waste collected separately to be delivered to landfill, an MBT or MTF (or to a waste-to-energy facility), a MRF, an ORF or a FOGO.⁶ If the third bin is for garden organics only, the waste in that bin may be collected and sent directly to an ORF (as well as to an MBT or MTF), with the cost to the government or municipality likely to be lower than if sent to an ORF rather than to a FOGO.

We note that apartment blocks with shoot systems have long allowed for separation at source and, in our increasingly urbanised world with higher density populations, the percentage of the waste stream separated at source in this way is likely to increase.

A key risk for waste projects is a change in the bin system structure, including removing, or adding, a bin (or bins), and changing the size of a bin (or bins). As will be apparent from Table 1 below, and as a general statement, MRFs, ORFs and FOGOs are dependent on separation at source. If separation at source ceases, or the mass of waste separated at source reduces, the

- 2 Sometimes referred to as “red-lidded bins”, being bins used for domestic comingled mixed waste.
- 3 As a general statement, recyclables are: aluminium, glass, high density polyethylene (HDPE), liquid paper board (LBP), mixed plastics, polyethylene terephthalate (PET) and steel.
- 4 Sometimes referred to as “yellow-lidded bins”, being bins used for domestic comingled recyclable waste.
- 5 In some circumstances, recyclables are separated further, with paper separated from other recyclables.
- 6 We have described a three bin system on the basis that it is a system that is used, or is increasingly being used, across a number of jurisdictions. Note, however, that some jurisdictions have less sophisticated, and some more sophisticated, bin systems.

Table 1: Waste treatment options for different bin systems

Waste Project	MTF	MBT	MRF	ORF	FOGO	WtE	Landfill
Bin System							
One Bin	✓	✓	X	X	X	✓	✓
Dual / Two Bins	✓	✓	✓ (yellow top)	X	X	✓	✓
Three Bins	✓	✓	✓ (yellow top)	✓ (green top)	✓ (green top)	✓	✓



result is that the mass delivered to the MRF, ORF or FOGO reduces. MBTs and MTFs (and waste-to-energy facilities) will be concerned about changes in bin system structures that lead to greater source separation of waste. Bin system structures affect the mass of waste sourced and available for delivery and, as such, the revenue that a waste project is able to earn, both from the gate fee⁷ paid for each tonne of waste delivered, and from the sale of recyclables derived from waste and products produced from waste. (Although we considered waste to energy projects in an earlier article in this series, it is worth noting that changes in the bin system structure may

7 We use the term gate fee to describe the amount payable by the government or municipality for the waste to be delivered to the waste facility and sorted, processed and treated at the facility. Many different terms are used (including “waste processing fee”).

affect dramatically the calorific value of waste delivered to a waste-to-energy project, affecting both the economics and the efficiency of the project.) Depending on the waste project, the sponsors may be concerned about any intermediate “sorting” or consolidation of waste before the waste is delivered to the project, including any sorting or consolidation at a transfer station.⁸ This is likely to be the case for MBTs and MTFs more than for other waste projects.

It is not appropriate for the sponsor of a waste project to seek to restrict what the government or municipality may do in terms of changing the structure of the bin system or undertaking any form of intermediate sorting or consolidation. Instead, the waste project should seek to address the consequence on the project of any of these changes through the charging regime or a modification regime established under the waste supply agreement (WSA) between the waste project and the government or municipality.

While it is possible for WSAs to contemplate changes that may have an adverse impact on the economics of a waste project, it is unlikely that the waste project will be compensated for any change unless the government or the municipality is responsible for it. Likewise, if a government or municipality makes any policy change that is of general application, it is unlikely that the waste project will be compensated under the WSA for that change.⁹

As a general statement, this has proved to be the case for waste projects in jurisdictions in which container deposit schemes (CDSs) have been introduced.¹⁰ CDSs result in high return rates for the recyclables to which they relate, because they incentivise the collection and delivery of those recyclables to delivery points in return for a monetary payment to the person delivering the recyclables. The impact of CDSs on MBTs and MTFs is to reduce the mass of recyclables delivered to those waste projects. The impact on MRFs depends on the structure of the CDS regime: if waste collected and consolidated is delivered to existing MRFs, the effect of the CDS regime is to increase the mass of recyclables delivered, and to change the mix and profile of such recyclables; if, however, waste collected and consolidated is delivered to new facilities, the effect of the CDS regime is to decrease the mass of recyclables delivered to existing MRFs. If the mass of recyclables delivered to existing MRFs decreases, it is reasonable to expect that the material delivered to existing MRFs will have higher levels of contamination.

In addition, waste streams can vary in quantity and composition on a seasonal basis which, in turn, may have an impact on collection programmes. In each case, the sponsor of the waste project will want to ascertain that sufficient waste within the modelled composition will be delivered to the waste project.

8 A transfer station is a facility at which waste is consolidated from a number of sources and transported to an ultimate destination or to ultimate destinations. In addition, waste may be subject to some form of sorting or compaction at a transfer station.

9 Although this approach to change in law and change in policy has become more usual than not, there is a policy argument that government and municipalities should allow the full effect/impact of a change in law or change in policy to be passed on to the households and businesses within its area, rather than being absorbed by the waste industry or subsidised by the government or municipality, or both. This will then send pricing signals, including as to waste avoidance.

10 CDSs aim to achieve the avoidance, reuse and recycling of waste: i.e. the outcomes at the pinnacle of the Waste Management Hierarchy – see Figure 1. CDSs incentivise the separation/segregation of recyclables, including aluminium, clear PET, coloured PET, glass, HDPE, LBP and steel, and the delivery of it to intermediate collection points by payment for recyclables delivered.

It is essential for any waste project to understand the likely quantity and composition of the waste to be delivered, to consider how the waste project might respond to changes that could affect the quantity and composition of the waste delivered, and to test (in the financial model for the project, and operationally) the impact of increased costs and reduced revenues.

A Tipping Point for Recyclables?

Changes introduced in the People’s Republic of China (PRC) at the end of 2017¹¹ have caused knock-on effects on waste projects (and the waste industry more broadly) around the world. The changes introduced did not go so far as to ban the import of recyclables; instead they prescribe maximum permitted levels of contamination for certain imported recyclables. Globally, many waste projects were not designed to achieve these prescribed lower levels of contamination, or their economic models had not contemplated achieving those levels, or both.

The changes introduced in the PRC have therefore reduced significantly the import of recyclables into the PRC, which has had an impact on waste projects around the world, and a material impact on waste projects in many jurisdictions, including Australia, Belgium, France, Germany, Japan, Indonesia, Italy, Malaysia, Mexico, The Philippines, Poland, the Republic of Korea, Spain, the United Kingdom and the United States of America. At the most fundamental level, these waste projects have been materially impacted, because the key consequence of the change introduced in the PRC has been to reset (at a materially lower level) the pricing for mixed plastic and paper derived from waste projects.

Until the end of 2017, the PRC had been the world’s key export market for recyclables from many jurisdictions. This has now changed, and has forced many jurisdictions to review their policy settings. With increased awareness of environmental issues, we are reaching, or have reached, a tipping point at which policy makers may be required to make decisions reflective of the cost of sorting, processing and treating waste which had previously been exported to the PRC.

With this change to the world’s key market has come the stark realisation that, if recyclables (plastics in particular) are not recycled, they will be disposed of to landfill, or that their ultimate destination may be the world’s waterways and oceans. In some jurisdictions with more established waste collection systems, decisions have been made to send recyclables to landfill. While this may be regarded as a short term response, it is unlikely to be considered as a sustainable solution, particularly in jurisdictions with scarce landfill facilities.

11 The PRC has established a “Blue Sky Program” under which it is implementing policies, introduced in 2017, prohibiting the import into the PRC of 24 categories of solid waste by reference to levels of contamination, including plastics and unsorted waste paper with contamination levels in excess of 0.5 per cent (initially 0.3 per cent) by mass.

Collection and Delivery – Collection of source separated material and disposal of rejected material and residual material

Collection and delivery to contracted waste projects

Equally as important as the policy allowing (or requiring) separation at source of waste is the collection of waste by a government or municipality (or by its contractor) and its delivery to the appropriate waste project. The collection services provided by governments and municipalities need to be sufficiently frequent to respond to the requirements of households and businesses while, at the same time, allowing efficient collection frequency and providing value for money for those upon whom the cost of collection is levied. It is important to understand that the simple dynamics of the size of bins, changes in the size of bins and collection frequency are material factors for waste projects.

A key risk for waste projects is a change in the collection and delivery programmes of governments and municipalities. This is a lower order risk than a change in the bin system structure, but it is nonetheless a risk that needs to be considered and addressed in the contract between the government or municipality and the sponsors of the waste project. While waste projects may differ, the ways of addressing this risk are similar.

Collection and delivery to uncontracted waste projects

Not all waste is collected by a government or municipality and delivered to waste projects. In some jurisdictions with developed waste collection systems it is possible to have waste projects without there being a contract in place with a government or

municipality for the delivery of all or, indeed, any waste. In addition, in some jurisdictions with less developed waste collection systems, governments and municipalities do not collect waste at all. In both of these circumstances, waste projects are described as "merchant" waste projects (either in whole or in part).

Disposal of Rejected Material and Residual Material

As is noted in more detail below, some of the waste collected and delivered to waste projects will not be compatible with the waste project and will need to be rejected (Rejected Material). In addition, depending on the waste project, residual material may remain after the waste has been sorted, processed and treated (Residual Material). The sponsors of the waste project will not want to have to pay for the cost of disposing of Rejected Material or Residual Material (i.e. the transportation costs and disposal cost, possibly to landfill or to another waste project). (Note that as waste projects become more sophisticated, Residual Material may be defined further (or refined) as "inorganic" or "non-recyclable" for the purposes of defining that which may be processed further to produce products (including fuel from waste), rather than being sent to landfill).

If the waste project is a contracted waste project it will seek to address these issues either by imposing an obligation on the government or municipality to collect and dispose of the Rejected Material and/or Residual Material at its own cost and expense, or by use of a pass-through charging regime that passes on the cost of disposing of the Rejected Material and Residual Material to the government or municipality.





However, the government or municipality will not want to be exposed on an open-ended basis to the sorting, processing and treatment performance risk of the waste project. To address this risk, the government or municipality will tend to agree to collect and dispose of (or to pay for the cost of disposal of) a stated percentage of the mass of the waste delivered (adjusted as necessary). The stated percentage will invariably reflect the level of diversion from landfill "advertised" as achievable by the waste project to the government or municipality. This will be stated in the WSA (and is known as the Diversion Rate/Target or Landfill Diversion Rate/Target).

The way in which Rejected Material and Residual Material is treated under the WSA is critical, including addressing any change in policy that may result in an increase in the cost of disposal. This is critical if the Diversion Rate is achieved or bettered. It is even more critical if the Diversion Rate is not achieved because the financial model for the waste project is unlikely to allow a contingency for this and, as such, it is likely to be an equity investor issue that will need to be resolved by unbudgeted modifications to the waste project to ensure that it achieves the Diversion Rate. In addition, depending on the approach taken by the government or municipality under the WSA, non-achievement of the Diversion Rate for a prolonged period of time may give rise to a default scenario, ultimately resulting in a right for the government or municipality to terminate the WSA.

If the waste project is a merchant waste project, these are risks that the project sponsors will have to manage themselves.

Delivery to waste project

As a general statement, waste projects do not earn revenue unless waste is being delivered to them. Therefore, in a contracted waste project the contract between the government or municipality and the waste project must address the delivery of waste. The contractual arrangements between governments or municipalities and waste projects will differ, depending on the nature of the waste project (see Table 2: **Forms of WSAs for Contracted Waste Projects**).

Whatever form the WSA may take, it is critical that it addresses the nature of the obligation on the government or municipality to deliver waste to the waste project. Over time governments and

municipalities have become sophisticated in dealing with delivery and, by and large, most WSAs now take the form of so-called "throughput contracts", under which waste projects are paid for the waste delivered, sorted, processed and treated.

If the WSA is a "quantity" contract (i.e. the government or municipality agrees to deliver a stated quantity of waste) the contract will be straightforward in terms of dealing with the delivery of waste and the consequences of under-delivery of the agreed quantity.

If the WSA is a "waste arising" contract this means that the government or municipality agrees to deliver all waste of a particular kind arising (or possibly collected) within the area of the government or municipality. The waste arising risk is increasingly dealt with through variable gate fees, with the gate fee increasing per tonne if the mass of waste delivered is less than a stated quantity, and vice versa.

If the waste project is a merchant waste project, these are risks that the project sponsors will have to manage themselves.

Table 2: Forms of WSA for Contracted Waste Projects

As a general statement:

MRF contracts tend to be shorter-term contracts, taking the form of service contracts, recognising that governments and municipalities tend to view contracts with MRFs in the same way that they view contracts with collection contractors. Also, governments and municipalities sometimes develop MRFs themselves, and may contract with a private sector contractor to provide operation and maintenance services.

MBT and MTF WSAs tend to be long-term contracts (20 to 30 years) taking the form of term concession contracts or public private partnership (**PPP**) contracts, reflecting the higher capital cost of MTFs and MBTs and the fact that they are likely to be project financed.

ORF WSAs tend to be shorter-term (and shorter-form) contracts, taking the form of service contracts, although some are concession contracts and PPP "lite" contracts, reflecting the concerns of the particular government or municipality.

FOGO WSAs tend to be longer-term contracts (circa 10 years) taking a number of forms, from service contracts form, to concessions and PPP contracts.

It is fair to say that the contractual arrangements tend to be longer in form (and more complex in substance) if the facility is to be located on land leased to the waste project by the government or municipality, and if a landfill is adjacent to the project, or if the project is co-located with a landfill site owned or operated by the government or municipality. In addition, governments and municipalities may make a capital contribution to the waste project or may have rights to acquire it at the end of the term. If this is the case, it tends to increase the length and complexity of the WSA.

Key policy setting for waste projects

The key policy setting for waste projects are detailed in the table below:

Environmental levers		
Environmental prohibitions prohibiting ocean dumping, open dumping and landfilling certain waste streams	Environmental standards for landfill to address contamination, leaching into the water table and methane emissions	Environmental standards on emissions to limit emissions, contamination and residue disposal for waste projects
Co-ordinated approval and licensing processes to allow timely and effective development and operation	Licensing for expansion of projects over time to take advantage of increased waste arisings in specific areas	Classification of waste to regulate how and where waste may be treated or disposed of and to license receipt of waste
CONSISTENCY OF REGULATION AND ENFORCEMENT: Unless regulations are consistent, and enforced across a jurisdiction, market forces will find a way to dispose of waste at the least cost and greatest profit, even in jurisdictions with developed waste collection systems.		
Municipality powers and levers, and enforcement		
Duty or power to collect waste , which may be an existing legislative outcome or require legislation if waste policy is less developed	Power to recover payment for the cost of collecting waste generally and for specific waste streams	Power to contract with the private sector to develop waste projects, including power to contract for longer term projects
Levelling the playing field		
Waste and landfill levies to incentivise more environmentally beneficial waste projects on a consistent basis across jurisdictions	Gap funding , including government grants and subsidies to achieve environmentally beneficial outcomes using waste projects	Revenue from MSW processing and treatment , including gate fees because municipalities chose waste projects over landfill
CHANGE IN LAW: The law is needed to “level the playing field” to allow for the development of and to regulate waste projects. Therefore, the risk of change in law is important to the private sector: it informs thinking as to how change in law risks need to be addressed contractually. Project sponsors and financiers will want economics that are sustainable on a long-term basis, assuming consistent regulation and enforcement and where underlying costs and revenue remain relatively predictable. Every contract will need to address changes in law affecting the relative costs and revenue of the waste project.		

Key waste streams

Waste is characterised in a variety of ways, with industry and regulators using common descriptions and terms. These are Municipal Solid Waste (MSW),¹² Commercial and Industrial Waste (C&IW),¹³ Construction and Demolition Waste (C&DW),¹⁴ Events Waste,¹⁵ Green Waste,¹⁶ Organic Waste¹⁷ (including bagasse¹⁸ and biomass¹⁹), Food Waste²⁰, Garden Waste²¹, Hazardous Waste²², E-Waste²³, Medical Waste (including Nuclear Medicine)²⁴, Bio-solid and Slurry Waste²⁵.

Figure 2 shows the various categories of waste types and which waste projects can be used for which type of waste.

12 Municipal Solid Waste is waste arising from human activities in urban environments (other than sewage and waste water).

13 Commercial and Industrial Waste is waste arising from commercial and industrial premises.

14 Construction and Demolition Waste is waste arising from construction and demolition work.

15 Events Waste is waste arising from entertainment and public events within municipalities, including music concerts and festivals, parades and sports events.

16 Green Waste is organic material from domestic “green” bins and the activities of municipalities (typically, parks and gardens, and lopping and topping of trees).

17 Organic Waste is a generic term for any waste that arises from the human management of flora, including agricultural, forestry and husbandry.

18 Bagasse is organic material arising from sugar cane or sorghum production.

19 Biomass is organic material arising from agricultural, forestry and husbandry activities.

20 Food Waste is organic material arising from commercial or domestic food preparation, which is increasingly being separated at source by households and commercial food outlets.

21 Garden Waste is organic material arising from domestic gardening activities.

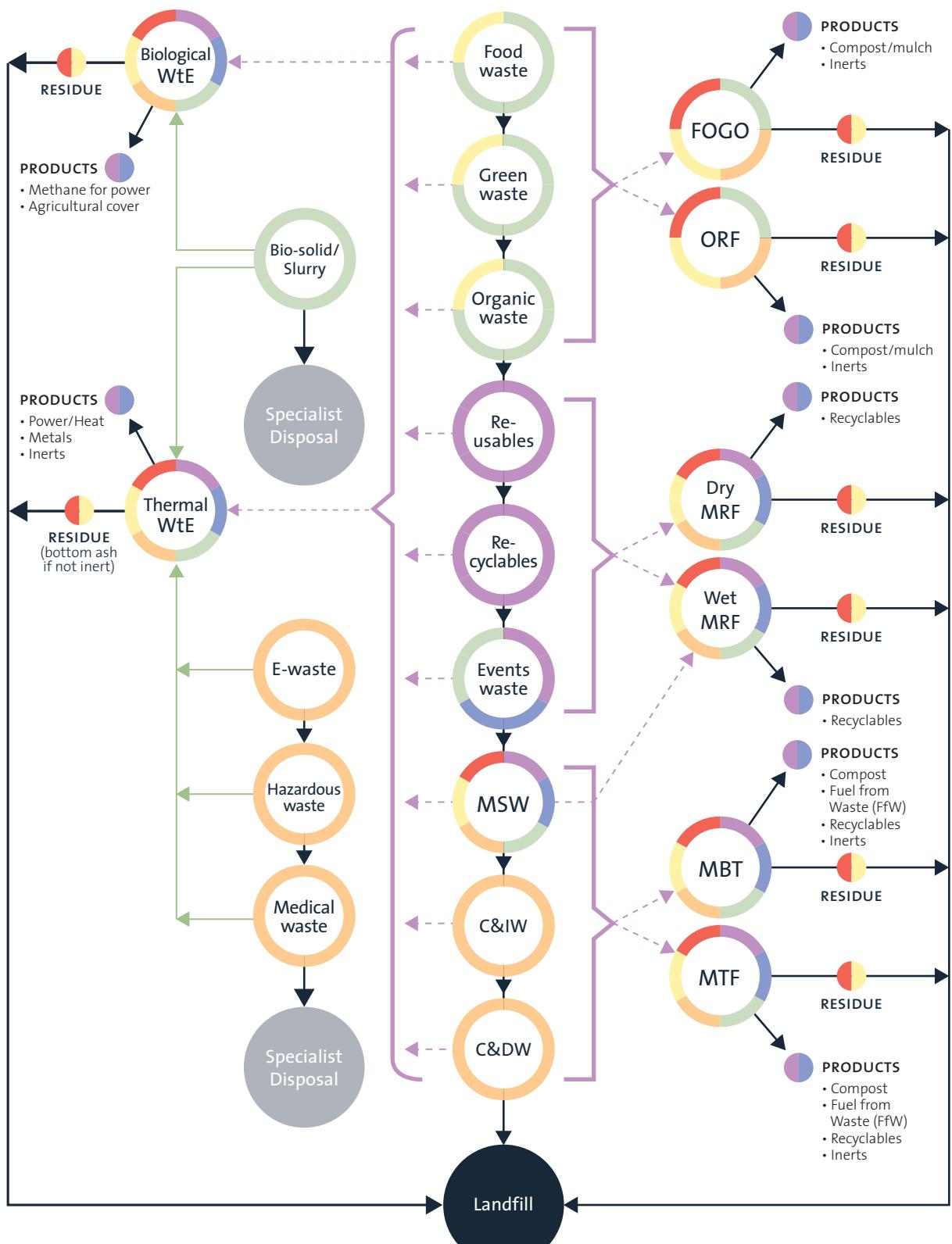
22 Hazardous Waste is waste that is potentially harmful to human health, animals, plants or the environment. Characteristics may include that the waste is explosive, flammable, poisonous, toxic, exotoxic or infectious, including hydrocarbon/water mixtures and wastes containing certain compounds such as zinc, lead and asbestos.

23 E-Waste is electronic waste including mobile phones, computers and other electronic appliances. Given the high rate of technological advancement and consumption of electronic goods, E-Waste is an ever-growing fraction of the waste stream.

24 Medical Waste is a generic term for waste arising from medical and pharmaceutical activities.

25 Bio-solid and Slurry Waste is human and animal waste matter derived from waste water processing or agricultural collection.

Figure 2: Waste types and how they may be treated



C&DW: Construction and Demolition Waste

C&IW: Commercial and Industrial Waste

FOGO: Food and Garden Organics

MBT: Mechanical and Biological Treatment Facility

MRF: Material Recovery Facility

MTF: Mechanical Treatment Facility

ORF: Organic Recovery Facility

WtE: Waste-to-Energy plant

KEY

- Reusable
- Recyclable
- Organic fraction
- Other

- Contamination
- Incompatibles
- > Flow of waste
- Conditional/optional flow of waste

Compatibility, Contamination, Composition and Capacity

In the context of waste projects, the four Cs – Compatibility, Contamination, Composition and Capacity – need to be considered and addressed. In a contracted waste project these will be addressed in the WSA.

Compatibility: On a contracted waste project, the sponsors of the waste project will want to ensure that they cannot be required to accept, process or treat waste that is not consistent with the design of the waste project or the terms of the approvals and licences for the project. This is invariably accepted in principle by governments and municipalities, but it can take time to reflect “in principle agreement” in the terms of the WSA.

Waste that is not compatible with the waste project is termed **Incompatible Waste** or **Unprocessable Waste**. A related concern for the waste project will be whether it is paid the gate fee or, indeed, any fee for Incompatible/Unprocessable Waste. If the waste project is a merchant waste project, these are risks that it will have to manage itself.

Contamination: On a contracted waste project, the sponsors of the waste project will want to ensure that they cannot be required to accept, process or treat contaminated waste if this might then result in a contamination issue which it is unable to manage:²⁶ contaminated material may cause further contamination of

²⁶ In the early days of certain MBTs, issues arose with the contamination of organic products from the contamination of the organic stream, including as a result of car batteries being delivered which, having broken, contaminated the waste stream then processed.



products produced by the waste project (i.e. a revenue consequence because the product cannot be sold) and may give rise to increased operating expenditure (i.e. a cost consequence, for example, increased cost of disposing of product that cannot be sold or used for the intended purpose). The waste project will be prepared to accept a certain level of contamination, and will cost the removal of the contamination (and its disposal) into its gate fee, but it will not accept contamination risk on an open-ended basis. This is invariably agreed and there are a number of ways of addressing this risk.

While the government or municipality will expect the waste project to identify contamination and to address it, the cost of doing so is likely to be reflected in an increased gate fee where the level of contamination is above a stated threshold. A related concern for the sponsors of the waste project is whether or not they are paid the gate fee for waste that is not accepted on account of being contaminated. Again, this is a risk that can be addressed through an increased gate fee.

Finally, the waste project may want to address the fact that contamination can affect the quality of the products produced by the waste project. It is likely that the government or municipality will resist any gate fee adjustment but they are likely to agree that the sponsors of the waste project should not be liable for producing a product that is not of the right quality.

If the waste project is a merchant waste project, these are risks that the project sponsors will have to manage themselves.

Composition: The sponsors of the waste project will be concerned to understand the composition of the waste that will be delivered to the facility, and for these purposes are likely to undertake a waste composition study. On most waste projects, the operation of the project allows the sponsors to undertake an “ongoing waste composition study” for the term of the WSA. The sponsors of the waste project will be aware of the consequences of changes in the composition of the waste delivered, and are likely to have to accept the risk that, over time, the composition of the waste may change.

On a contracted waste project, the project sponsors are less likely to accept the composition risk if it arises from a decision by the government or municipality and gives rise to reduced revenue or increased costs. This can be a difficult issue to negotiate, with the position of the government/municipality typically being that the waste project should be able to manage changes in composition risk.

Finally, as was the case in relation to contamination, it is important for the change in composition to be recognised as a factor that may affect the quality of the products produced by the waste project.

If the waste project is a merchant waste project, these are risks that the project sponsors will have to manage themselves.

Capacity: On a contracted waste project it is likely that the government or municipality will want, under the terms of the WSA, to be able to deliver less waste to the project in the earlier years, and more in the later years. The charging regime under the WSA will need to address this. Depending on the charging regime adopted, it may be necessary for the WSA to reserve capacity or to circumscribe capacity that, if not being used by the government or municipality, may be used by other suppliers of waste.

Availability Risk and Alternative Facility Risk for contracted waste projects

WSAs impose obligations on waste projects:

- to be available to accept, process and treat waste; and
- in the case of ORFs and FOGOs (and some MBTs and MTFs) to produce products for sale (i.e. compost and mulch).

If a waste project is not available to accept waste, irrespective of how the gate fee is structured, the waste project will not be paid to the extent that it is not available, i.e. it will be paid only for the waste that it accepts, processes and treats in accordance with the WSA.

If the waste project is not available, the government or municipality must find another means of disposing of that waste. Increasingly, if the waste project is not available WSAs require (or give the government or municipality the option to require) the waste project to accept the waste at an Alternative Facility equivalent to the waste project, with the additional costs of transportation to, and processing and treatment at, the Alternative Facility being paid by the waste project. If the waste project is required to use an Alternative Facility, it will be paid as if the waste accepted, processed and treated at the Alternative Facility had been accepted, processed and treated at the waste project itself.

Many waste projects will seek relief from having to accept, process and treat waste if the reason why the waste project is not available is not of its making (a **Good Reason**). While some WSAs provide relief events for non-performance, these are likely to be in very limited circumstances, and contamination or waste composition are unlikely to be one of the circumstances.

Some WSAs also measure **Availability**. In addition to the consequences of not being Available, as outlined above, certain levels of Availability may give rise to obligations to rectify the cause of being below stated Availability levels. In these circumstances, the way in which Availability is determined and the period of time over which it is measured will be key issues for the sponsors (and operators) of a waste project and their financiers. The waste project will be expected to assume, and should assume, Availability risk, but Availability should take account of whether there is a Good Reason for lower Availability (and, if there is, the waste project should not be penalised).

Depending on how Availability is determined, this may also affect the achievement of any Diversion Rate/Target or Landfill Diversion Rate/Target, as it is likely that the government or municipality will want the Rate/Target to be determined by reference to Availability. If this is the case, the WSA will need to ensure that the Diversion Rate/Target takes account of any Good Reason for lower Availability and a lower Diversion Rate.

In addition, some governments and municipalities will want the waste project to accept all waste, i.e. with the waste project having no right to reject Incompatible or Unprocessable Waste. Again, if this is the case, in addition to dealing with the cost of disposal of this waste in the WSA, the WSA should not take account of this waste for the purposes of determining Diversion Rate/Targets.

Finally, if the waste project is to take waste from multiple sources it will be necessary to ensure that the WSA deals with the consequences of doing so in an effective manner.

Conclusion

For the waste projects described in this article, and the waste-to-energy projects described in our second article in this series ("Waste-to-wealth initiatives: waste-to-energy projects"), the maturity of the industry participants who are developing these projects, and the highly developed (and now well-accepted) bases for contracting waste projects, provide governments and municipalities with a range of economically viable and sustainable solutions to the ever-changing, and increasingly global, waste landscape. The changes introduced in the PRC in 2017 (in our view, a tipping point) have forced all participants in the waste industry to look for more sustainable (and possibly higher value) revenue streams from recyclables derived from, and products produced from, waste: as has been demonstrated, it is not sustainable to rely on one export market to avoid the development of, or to delay the implementation of, policy and funding decisions. As a result, we are seeing (generally, and with governments and municipalities) a greater recognition of the necessity for self-determination in how to avoid, and how to manage, waste.



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WASTE NOT, WANT NOT:

Energy-from-Waste refinancings – the opportunities and challenges

By CAMERON SMITH AND PATRICK BOYLE

In the last 12 to 24 months, the UK and Irish waste markets have seen an increase in refinancing activity and a greater appreciation of the financial benefits available to sponsors from refinancing their existing projects.

This greater interest in refinancing projects in the Energy-from-Waste (EfW) market has been driven by a number of factors, each of which has provided ideal conditions for refinancings to take place:

- greater liquidity in the debt markets and, in particular, appetite from institutional investors for the sector;
- lack of opportunities in other traditional infrastructure sectors; e.g. social and economic infrastructure;
- the greater maturity of the EfW sector and a growing knowledge base and acceptance of mainstream EfW, creating trust in the ability of developers in the EfW market to generate stable long-term revenue streams; and
- historically low interest rates.

These factors have encouraged sponsors to look far more seriously at creating value through the refinancing of existing operational projects. Even among developers of waste gasification facilities – who previously developed their facilities on an all-equity basis – there is now a greater appetite for raising commercial debt in order to refinance expensive equity. As the more risky construction phase of gasification projects passes, and the technology becomes better

understood, sponsors are looking to capitalise on the opportunity to release some of this equity funding by taking on debt capital, assisted by the certainty that these projects have now achieved ROC¹ accreditation.

The following article outlines some of the key issues which need to be considered by EfW developers when looking to refinance these projects, based upon Ashurst's experience in acting for both developers and lenders in this increasingly mature market.

Refinancing Structures

Refinancings are typically considered to fall into three broad categories:

- *Simple refinancings* – where the pricing/covenant commitments/tenor are renegotiated with the existing bank group, but without any material changes to the parties involved or the hedging arrangements;

¹ Renewables Obligation Certificates issued under the UK's Renewables Obligation scheme, and designed to encourage the generation of electricity from eligible renewable sources.

- *Structural change refinancing* – replacement of a particular facility through an amendment and restatement of the original financing document. This still involves the same debt providers, but introduces a change to the structure of the finance facility to more appropriately match the shareholders' evolving needs; and
- *Full refinancing* – a full repayment and cancellation of the existing financing arrangements, to be replaced by new financing documents, potentially with a new group of lenders.

In determining the most appropriate structure to adopt and the extent of any refinancing to be contemplated, the analysis will typically involve the consideration of the factors referred to below.

Factors affecting possible debt arrangements

In restructuring and/or refinancing the debt facilities, the sponsors will need to take the following into account in determining the most appropriate structure:

- whether new intercreditor arrangements will be required, depending on the new structure and identity of lenders;
- whether any "amendment fees" or "waiver fees" will be payable to the funder group, particularly in the event of a simple refinancing, where there will still be transaction costs and waiver fees to take into account;
- the impact on the security arrangements, particularly where commitments have been extended or the tenor is being increased. Any increase in risk being taken by the funders may require greater security to be provided by one or more of the contractual parties;
- any necessary changes in the identities of the agent, security trustee and/or account banks: depending on the parties involved in the new debt facility, one or more of these roles may need to be changed, potentially requiring notice to be given to various project document counterparties, and replacement direct agreements may need to be produced;
- the covenant and/or events of default package, particularly in light of the opportunity presented to borrowers to amend the debt terms. In particular, if there are unduly onerous covenants or restrictions on the activities of the borrower, a refinancing presents an ideal opportunity to renegotiate these requirements;
- any new bank requirement, due to updates in industry standard provisions (e.g. Basel III, CRD IV, EMIR, FATCA, etc.).² Borrowers will need to be aware of these updated funder requirements when undertaking any refinancing;
- depending on the development plans of the shareholders, the borrower may wish to obtain pre-approval from the new lenders for any future development/expansion opportunities

² **Basel III** is an internationally agreed set of measures developed by the Basel Committee on Banking Supervision in response to the financial crisis of 2007-09, whose aim is to strengthen the regulation, supervision and risk management of banks. It builds on the measures set out in the Basel I and Basel II documents. **CRD IV** (the Capital Requirements Directive IV) is an EU legislative package which sets out prudential rules for banks, building societies and investment firms. **EMIR** is the European Market Infrastructure Regulation on derivatives, central counterparties and trade repositories, which imposes requirements to improve transparency and reduce risks associated with the derivatives market. **FATCA** is the Foreign Account Tax Compliance Act, a 2010 United States federal law requiring foreign financial institutions and certain other non-financial foreign entities to report on the foreign assets held by their US account holders.

being contemplated at the time of refinancing. Dealing openly with the funders with regard to these future plans will avoid the need for expensive and protracted negotiations at a later date with the new bank group; and

- the shareholders will also need to consider whether they wish to renegotiate any restrictions on distributions (e.g. by removing any cash sweep arrangements or similar covenants).

Impact on interest rate swaps

In all but the most simple refinancings, the hedging counterparties will often have consent rights and/or rights to terminate their swaps in the event of a refinancing.

The existing terms of the interest rate swaps may even dictate the nature of the refinancing which is possible or, in more extreme cases, may prevent a refinancing taking place at all.

Relevant considerations include:

- whether the interest rate swaps are in or out of the money for the borrower – in order to avoid crystallising any significant hedging termination liabilities, the borrower may wish to explore options to keep some or all of the existing swaps in place following a refinancing;
- if the interest rate swaps are to be kept in place, it is likely that there will need to be amendments to these swaps to take into account the terms of any new facilities; the hedging counterparties may also need to accede to the terms of the new intercreditor arrangements;
- if the interest rate swaps are to be terminated, the parties will need to consider how the termination will take place and how the break costs are to be calculated – this will be key in considering the viability of any refinancing, given the potential hedge breakage costs involved; and
- the sponsors will also need to consider the extent to which the ISDA documents³ will need to change as a result of the European Market Infrastructure Regulation.

³ Industry standard documents for swaps and derivatives trades, produced by the International Swaps and Derivatives Association (ISDA).



As a general rule, fewer issues will arise if the hedging counterparties remain lenders under the new financed facility, as they are more likely to assist with the overall refinancing process. However, this is not always possible.

Interaction with authorities/commercial parties

Unless the refinancing simply involves the renegotiation of funding terms with existing lenders, it is likely that any refinancing will require some form of interaction with existing contractual counterparties. For more significant refinancings, this will require consent to be obtained from all major project parties (other than, perhaps, the Building Contractor, assuming that the project has passed all pre- and post- take-over commissioning tests) who may be required to enter into new direct agreements.

This issue will be more acute if the project was originally established as a PPP project: typically the consent of the procuring authority to the refinancing will also need to be obtained and, in many cases, a large share of the refinancing gain may need to be negotiated and shared with the relevant authority. In tandem, one of the more significant issues to be addressed upfront with any procuring authority is the extent to which any compensation on termination payable under the PPP agreement will be increased to cover all new debt being assumed by the borrower. Unless the authority is prepared to increase its exposure and repay the new debt following any termination, the borrower's ability to assume increased debt levels may be severely restricted if the payment of compensation on termination is a key part of the credit story: for example, if the asset has to be handed back to the authority on termination of the PPP agreement.

Other key considerations in relation to the PPP agreement are as follows:

- funders will typically want confirmation from the procuring authority and other key contractual parties that there are no outstanding liabilities existing at the time of refinancing and that there are no breaches which are capable of triggering termination. Formal acknowledgements will typically be required from these counterparties, which may require settlement of existing and outstanding claims;
- if there are any "simmering" disputes or other matters which could or should be clarified or addressed at the time of refinancing, these should be dealt with by the developers before involving new funders: new funders will typically wish to start with a "clean slate" and therefore will not want to lend into a project which has existing unresolved issues; and
- in return for granting their consent, procuring authorities and/or key contractual counterparties may require concessions from the borrower. Such concessions may, in the more simple cases, simply involve payment of a "consent fee" or "waiver fee". In more complex cases, counterparties may, in return for granting their consent, require a relaxation of covenants, the release of existing security, a renegotiation of liability caps or even a share of the refinancing gains being made.

Before approaching new debt providers, sponsors should consider what third party consents will be required and what concessions such third parties may seek to extract in return for giving their consents. Refinancing is also an ideal opportunity for shareholders to extract concessions from third parties and to "tidy up" a previously complex structure put in place at the time of the original financial close.





Shareholder debt/equity

The shareholders will also need to consider whether to refinance or to amend the terms of any shareholder-provided subordinated debt or equity. In particular, if this subordinated debt or equity is to be restructured or refinanced, the shareholders will need to consider the tax and accounting implications of distributing the refinancing proceeds to the shareholders.

Clarity on tax and accounting issues should be obtained from financial advisers before engaging with debt providers.

Accounting considerations

At the time of the refinancing, shareholders will need to seek expert advice as to whether the refinancing constitutes an extinguishment of the debt or a modification to the debt, for financial reporting purposes. There may also be considerations to address in terms of the accounting treatment of any related interest rate swap termination or amendment payments.

On several recent refinancings, the accounting analysis has become a critical workstream and has been the cause of significant delay to the overall refinancing process. Developers should be aware that not all financial advisers are aligned in their analysis of the relevant accounting considerations.

Process

Once the overall terms of the refinancing have been agreed by all parties, advisers will also need to consider carefully the process involved in effecting the refinancing. Given the need to raise new debt before the existing security package has been released, the parties will need to consider the use of escrow mechanics and how the grant of new security will be coordinated with the release of the old security package.

While this may appear to be a simple mechanical process, the mechanisms associated with a full refinancing can give rise to significant legal and commercial issues, particularly where

unexpected events occur between the date that the new debt is raised and the date that the old lenders are fully repaid and have released their security.

The process of terminating the interest rate swaps will also need to be considered, including any associated notice periods to enable termination of these swaps to occur.

Conclusion

Carefully managed, and with the right financial and legal advisory team, a refinancing of an energy from waste project can give rise to significant financial and commercial benefits for the shareholders/developers.

Projects that were originally financed in a difficult market and on the basis of onerous commercial and financial terms can be restructured in a way which results in a cleaner and less restrictive structure, enabling the original developers and shareholders to create a platform for greater growth and expansion of existing facilities.

The opportunity to refinance the debt can also act as a catalyst for other improvements in the project documentation and may assist in the development of a more mutually beneficial relationship with the authority which shares in the refinancing benefits.



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The global infrastructure industry:

Following Darwin or the ostrich?

Mark Elsey writes...

A recent article in the Financial Times made great play of the fact that the total amount invested in new water infrastructure in the UK since privatisation – largely funded by borrowing – was broadly the same as the aggregate dividends paid to water company shareholders over the same period. In other words, the article argued, a publicly-owned water industry could have invested the same amount debt-free, and burdening the industry with high leverage was principally a means of extracting large dividends for the shareholders.

Now, there are of course a range of counter-arguments regarding efficiency, accountability, innovation etc., that those of us who believe in the value of private investment in infrastructure would make in order to rebut this proposition. But these “value” arguments continue to be difficult to prove in the absence of validating data. And the apparent simplicity of the counter-arguments, coupled with negative publicity about half-built hospitals going bust and school walls collapsing, only feed the anti-“private” sentiment that appears to prevail across many sections of the public.

With the UK seen by many across the globe as a trailblazer in introducing private operators and investors into historically public-owned and funded infrastructure, should this be seen as a “local” issue, or are there potential ramifications for the global infrastructure market?

With projects as geographically diverse as Sydney Light Rail (subject to significant delay and a A\$ one billion dollar compensation claim from the contractor) and the Denver Eagle P3 project (subject to a recent project default notice served by the authority), there are worrying signs that, across the globe, both public and contractor sentiment towards private investment may run through the same cycle of excitement, frustration and, ultimately, hostility that we have experienced in the UK.

The frustrating thing with this is that the world badly needs private investment if it is to meet its substantial infrastructure deficit, and there remain compelling macro arguments in favour of institutional pension, insurance and sovereign wealth funds investing in infrastructure to generate the growth required for countries across the globe to provide their populations with an acceptable standard of living.

So, should the private infrastructure industry head ostrich-like for the nearest sandpit or is it time for action? In my view, the answer is clear: if the global industry does not move to address the negative perceptions – and, indeed, the substance behind some of these perceptions – there is a significant danger that what is currently seen as principally a UK problem will, in the next few years, become a global problem. So what can be done?

My starter for six would be:

- **focus on outcomes:** we need to evolve models that are more clearly focussed on delivering value to society (for example, through reduced reoffending by ex-offenders or lower susceptibility to MRSA in hospitals) and which can offer tangible evidence of the benefits that are being delivered;
- **evolve the partnership model:** we need to continue the move away from a binary world of either traditional public procurement or private “project finance” models, and develop a wider range of partnering models that provide more flexibility for the public and private sectors to play to their strengths, and adopt a more sophisticated approach to risk and reward;
- **take ESG seriously:** as trailed by others, the industry needs to see environmental, social and governance considerations as fundamental to their business – not as optional extras. Developing an industry-wide governance code of best practice would be a good start;
- **deliver fit-for-purpose investment:** we need to structure competitions and funding solutions that are sympathetic both to the nature of the underlying infrastructure and to public expectations. A five- to seven- year horizon private equity model may work for an investment in a solar project or merchant waste treatment plant but it is difficult to see how such horizons and investment drivers are compatible with, say, a community hospital or a water treatment and distribution network;
- **review the accounting framework:** balance sheet treatment too often trumps value and sensible risk transfer. It makes no sense for a country to account for a commitment to a 30-year availability payment for a new asset in the same way as it does when borrowing to meet its annual current account deficit; and
- **adopt an enhanced community focus:** the industry needs to work much harder at communicating and engaging with the community, both locally and nationally. Infrastructure investors need to act as, and to be seen as, organisations committed to providing enhanced services to the public on a sustainable basis: not as financial vehicles focused on providing the lowest cost “acceptable” service to enable the maximum extraction of cash.

None of these proposals are revolutionary and, undoubtedly, there are already examples of much that is good across the industry. The truth, however, is that this is not the wider perception. Whatever the outcome of other current political car crashes, the UK is – and is still seen as – a leader in the private infrastructure industry. With leadership comes responsibility and what now needs to happen is for the industry in the UK to engage with the public sector to proactively promote and wholeheartedly embrace the case for evolutionary change.