Improving Value for Money in Italian Project Finance

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Abstract
Purpose – The purpose of this paper is to detect how Value for Money (VfM) in Italian Project Finance (PF) investments can be enhanced and challenging criticalities minimized, with a synergistic interaction of macroeconomic, legal and institutional actions.
Design/methodology/approach – Analysis of VfM quantitative key drivers, within a public-private partnership (PPP) framework with specific reference to a recession context, with infrastructural capital rationing implications. Empirical evidence is given by an Italian PF healthcare model, testing the impact of legal and macroeconomic changes.
Findings – Deleverage, ignited by W-shaped recession, disinflates PPP investments, so forcing to innovative and penniless solutions. Unreliable and short-sighted legislation and consequent unfriendly business climate may frighten investors, so decreasing competition and VfM.
Research limitations/implications – VfM sensitivity to macroeconomic and legal/institutional parameters is too wide and capriciously erratic to be comprehensively modeled. Tips for further research include pro-growth tax and budgetary policies, risk minimization issues and other synergistic targets.
Practical implications – Guidance to regulators to fine tune legal and institutional tools, so as to create a stable, business friendly environment. Recessions may be softened by sensitive policymaking, or exacerbated by short-sighted ignorance and lack of strategic focus.
Originality/value – Unprecedented analysis of legal and macroeconomic changes on VfM in Italian PF investments, with original tips for VfM optimization, in a comprehensive PPP framework.

Keywords Fiscal policy, PPP, Cost of capital, Recession, Traditional procurement, Legislative risk, Keynesian growth

1. Introduction
Public-private partnership (PPP) involves a contract between a public authority and a private counterpart, in which the private party provides a public service or project, delivering infrastructure and associated services, and assumes substantial financial, technical and operational risk (Akintoye and Beck 2009; Demirag and Khadaroo, 2011). PPP’s aim is to further the public interest in free market economies.

Project Finance (PF) investments have become increasingly popular in the last years, especially if they concern infrastructural PPPs. PF is a long termed and capital intensive investment, guaranteed by expected cash flows, rather than the assets of the project sponsor. Private entities are typically highly leveraged with non-recourse loans, so being exposed to credit crunches.

Filling a gap in the existing literature, this paper is inspired by challenging criticalities in the quantitative aspects of Value for Money (VfM) (Grimsey and Lewis, 2005; Amponsah and Forbes, 2012), highly sensitive to legislative risk, and institutional and macroeconomic variables, whose erratic interaction is hard to fit and manage. Value creation for the private counterparts and proper reward for debtholders, i.e. Value for...
Money, needs also being considered (Moro Visconti, 2014), being banks, as well as other financial sponsors behind private investors, a key PPP stakeholder. PF should be chosen whenever it offers the best VfM, so maximizing the utility derived from every sum of money spent in the PPP investment, compared with traditional procurement, due to a minimum purchase price combined with maximum efficiency, effectiveness, worth and usefulness.

Some elements of VfM are subjective and difficult to measure, especially if qualitative, and careful judgment (deriving from experience, best practices and proper benchmarking) is therefore required, when assessing whether VfM has been satisfactorily achieved or not. It should not, however, be forgotten that “PFI, like other forms of decision-making, is dominated by quantitative risk estimation” (Broadbent et al., 2008).

Due to its multifaceted and somewhat controversial nature, uneasy to be defined and measured, VfM depends on an instable mix of qualitative and quantitative variables, which need proper assessment and coordination. Quantitative issues need to be examined synergistically with qualitative aspects of VfM: while the former may be objectively measured and compared, the latter have a less clear cut, albeit still crucial, impact on VfM.

Innovative partnership models are for example difficult to embody into numbers, even if their impact on spreads, profitability ratios, etc. may prove significant.

Quantitative and qualitative key VfM drivers are methodologically examined separately, due also to their different nature, albeit their often capriciously mixed interaction deserves proper modeling and careful analysis, going beyond the target of this study.

Good planning minimizes the risk of unsuccessful incomes, while openness and transparency of the competitive selection process demonstrates and furthers the public commitment to optimizing VfM.

The wide literature on the topic indicates that VfM, within the PPP context, is still an ambiguous concept, offering competing understandings (Eadie et al., 2013b). Relevant interdisciplinary literature sources, trying to disclose and soften the aforementioned criticalities, will be accordingly quoted in the paper.

The paper is methodologically organized as follows: after having identified background issues such as VfM key drivers and the PF investment’s perimeter, peculiar bankability issues are analyzed, so considering the complementary role of financial supporters, within a recessionary capital rationing scenario, where spreads grow, and margins are stressed by public budget constraints. Innovative partnership models, consistent with the recessionary trend, are then examined, showing the positive role of multi purpose stakeholders.

A sensitivity analysis conducted on recent legislative novelties and macroeconomic trends, within the Italian healthcare PF industry, supports applicative implications with empirical evidence, showing the impact of VAT rate changes, reduced interest rate spreads and extended concession on the PF investment, with VfM implications.

Practical VfM enhancing proposals and tips for further research conclude the study.

2. VfM key drivers
VfM key drivers (Yuan et al., 2012) are represented by a changing set of capriciously interacting quantitative and qualitative variables, which are variously sensitive to legislative and institutional changes. Uncertainty and risk are a consequent unsurprising outcome, likely to puzzle and frighten investors, so potentially dwarfing joint value creation, competition, and public VfM.

VfM is the key strategic parameter behind any “make it or buy” option, consistent with a public sector comparator estimate (HM Treasury, 2006), which shows whether a
private investment proposal is more convenient than any alternative most efficient form of public procurement (Burger and Hawkesworth, 2011; Coulson, 2008; Guccio et al., 2012; Ismail et al., 2012; Morallos and Ameudzi, 2008; Mooney, 2011; Nisar, 2007) improving the delivery of public services with the involvement of private sector expertise and capital.

Key VfM drivers are exemplified and presented in Figure 1.

Most of the abovementioned parameters are quantitative, even if they have a soft part: for example, the PF investment framework/tender architecture embody some qualitative issues (considering, for instance, some aesthetic parameters, conscious uncertainty recognition, shareholder composition or organizational culture issues, which may not fully be reflected by numbers, even if they have a quantitative impact on performance).

Key drivers are linked among themselves by economic factors: for example, inflation is linked to nominal cost of capital, which embodies risk premiums or spreads, and changes the nominal tax base. Financial innovation (represented for instance by new products such as project bonds or by a still infant secondary market for equity-holdings) may reduce the cost of capital and interacts with the institutional and legal framework.

VfM in PF crucially depends on performance monitoring to provide incentives for improvement and to ensure that service delivery is in accordance with the output specification (Robinson and Scott, 2009). However, the effectiveness of performance monitoring and output specification cannot be fully assessed until PF becomes operational. There is also a need to examine the role of the performance monitoring mechanism in ensuring that affordable VfM is achieved throughout the delivery of services.

The Eurostat clarification of February 11, 2004 (Commission of the European Communities, 2004; European Commission, 2002), states that a design, build, operate and finance PF investment is off balance sheet, and therefore does not affect the General Government Balance upfront over the construction period, provided that the private sector partner carries the construction risk (Bain and Plantagie, 2007), and either the availability or the demand risk. The rationale behind Eurostat rules is that if sufficient risk is transferred to the private partner, there is a public VfM which deserves public budget amnesty.

Figure 1.
VfM key drivers
VfM is a dynamic concept, which so needs to be discounted over the whole project’s useful life; risk is so a major component of VfM, consistently with the aforementioned Eurostat prescriptions, whose interpretation is becoming increasingly tight.

The following main categories of risk, which comprehensively affect PF accountability and VfM (Demirag and Khadaroo, 2008), seem relevant (Moro Visconti, 2010; Ke et al., 2010; Siemiatycki and Farooqi, 2012; Zulhabri and Torrance, 2006):

1. risks of planning – engineering – construction (cost and time overruns);
2. financial risks;
3. governance – sponsor risk;
4. operating and performance risks;
5. market risks;
6. network and interface risks;
7. procedural, contractual and legislative risks; and
8. macroeconomic – systemic risks.

Risk and uncertainty, connate in PF investments, are naturally amplified by their (long) temporal extension and PPP contractual arrangements may prove inappropriate for the provision of public services over the medium term (Froud, 2003).

Drawing a captivating investment perimeter, shaping the characteristics of the PF/PPP model and defining its structural boundaries (kind of project; duration of concession; other qualitative and quantitative specifications, etc.) is a key public prerequisite for its appeal towards private competitors. Smart architectural design matters and creative private contribution with knowledge pollination enhance VfM in a win-win scenario.

The perimeter of any PF investment so represents its backbone and essence, providing an indispensable reference for interactive VfM considerations and ex ante evaluations (Barretta and Ruggiero, 2008). Proper design of the architecture of the investment, with careful blending of qualitative requisites and quantitative issues (price, etc.) is a critical factor for its success and feasibility.

Interactive VfM, concerning both the public and the private part, can be envisaged first of all with a preliminary analysis of the investment’s boundaries; basic input data such as construction and maintenance expected costs, duration of the concession, amount of the public contribution, availability payment and marginality of no-core activities to be privately run, have to be jointly considered, within a comprehensive business model.

Proper balance of conflicting public vs private interests (of the SPV and its contracting out suppliers) have to be foresighted and contractually considered, so as to bring to real VfM maximization, which has to consider also the interest of private competitors and their backing lenders, in a synergistic joint venturing of bundled interests.

3. Coping with infrastructural capital rationing

Infrastructural public investments (Helm, 2009) are part of the capital accumulation required for economic development and stimulate economic growth, especially according to expansive Keynesian theories applied to recessions, in order to overcome muddy long-term stagnation.
Within a PPP framework, infrastructural PF – particularly fit when the acquisition of private capital might otherwise be uneasy to stimulate – may be a suitable tool for softening a typical dilemma of our times: since the public debt of western countries is booming, particularly after the big recession started in 2008 and not yet over, little money is left for investments (Asenova et al., 2009). But investments are pro-cyclic and incentive growth, so increasing the tax base, to be partially used for debt reduction; this public situation is comparable to that of highly indebted companies that need internal funds to back new investments, being unable to raise additional debt.

The equation “no money, no investments” may bring to a complete paralysis, unless innovative way to finance them are used with contingency plans (Williamson and Zeng, 2009), and “money procurement” stands out as a key dilemma for both public and private players. With PF, the public entity can “rent” the investment, repaying it along the concession period. In broader terms, Keynesian economics advocates counter-cyclical policies within a mixed economic system – mainly private, but with a moderate public role – in full accordance with a PPP framework.

Public works are possibly the most important source of infrastructure, consistent with a PPP model typically backed by a PF investment package. To the extent that infrastructures form a large and synergistic network, their public nature becomes even more likely, because they respond to public needs, and need to be regulated avoiding private conflicts of interest or exclusions which limit unbounded public availability. This connectivity among different complementary infrastructures (e.g. roads linked to schools) requires general supervision, typically performed by public bodies, with a strong political impact.

In public economics theory, monopolistic and hard to duplicate infrastructure assets such as highways and railways tend to be public goods, in that they carry a high degree of non-excludability, where no household can be excluded from using it, and non-rivalry, where no household can reduce another from enjoying it. These properties lead to externalities, free ridership, and spillover effects that distort perfect competition and market efficiency, so affecting VfM. Hence, government typically becomes the best actor to supply the public goods, so crucial to make the economy of a country attractive and competitive and representing a key growth driver.

A further complementary problem is represented by the credit crunch occurred since 2008, with an impact on both loan availability and credit spreads (Morgan and Murtagh, 2012). Scarcer and more expensive funds have a direct impact on investments and a somewhat surreptitious effect on their long-term risk, affecting bankability and debt service.

Infrastructural capital rationing affects VfM considerations, making investments more expensive and difficult for the private part. Competitive pressures among private competitors induced by shrinking infrastructural demand somewhat limit private to public rebating of higher financial costs, so decreasing private profitability, up to a breakeven threshold which may affect overall PPP sustainability.

PPP risk assessment in recessionary times unsurprisingly stands out as an uphill task (Gabriela and Mircea, 2010). Recession imposes significant pressures on resources, efficiency and effectiveness, inevitably requiring a detailed consideration of what constitutes the current understanding of VfM.

Convenience analysis has to properly consider not only public fiscal constraints and Eurostat prescriptions, but also other aspects, linked for instance to (net of taxes) private profitability. Both traditional procurement and PPP agreements need, to a different extent, a private counterpart, whose revenues are anyway taxed,
so nationalizing part of their extra gains. And Keynesian multipliers may transform public spending into a forward looking investment, with shared PPP long term profitability.

4. The rising cost of risky debt
Discounted cash flow analysis is a key PF evaluation criterion, with important VfM implications, strongly depending on risky cost of capital.

Risk is comprehensively embedded in the cost of collected equity and debt, which grows in recession times, following a twin and two-way crisis of private and public debt. And even if financial risk is formally outside the perimeter of the aforementioned Eurostat rules, in practice it may severely hamper the possibility of private companies to participate to competitive bids and to gain profitable returns, surreptitiously charging their extra costs to the public entity.

Cost of debt is the market value of the remuneration required by banks, so being linked to public VfM and private market returns, and ultimately being transferred from banks to the public part and its backing taxpayers.

Paid in capital is expensive to collect by the private entity’s shareholders, even because it is risky, with no fixed remuneration and to be cashed back as a last claim. Subordinated (junior) debt is somewhat in the middle between capital and senior debt, being so allocated in the “quasi equity” section. For the private entity’s shareholders, advantages (if underwriting subordinated debt, instead of capital) derive from the very fact that debt is anyway interest bearing, whereas capital can be remunerated with dividends only whenever net results and free cash flows are positive.

It is so convenient, even if uneasy during recessions, for the private entity to minimize its infused outstanding capital, maximizing senior debt and using subordinated debt as a cushion to balance the two, keeping (over) leverage under control. While the issue mainly concerns the private entity and its banks, the public part has also an indirect – but not trivial – interest in securing that the private entity is financially sound.

The higher the spread of subordinated debt, the higher the cost of quasi equity; being subordinated debt typically issued by the private entity’s shareholders, interest rates paid by the private entity to the subordinated debtholders compete with dividends to be paid to the private entity’s shareholders, as an alternative form of remuneration. The differences between the return (cost) of quasi equity vs the return (cost) of equity concern not only the abovementioned possible asymmetric underwriting, but also the timing, since interests on debt start to be paid before dividends and subordinated debt is reimbursed after senior debt, but before capital – so the present value of subordinated debt interests and repayment is, Ceteris paribus, higher than that of dividends and paid back capital.

The present value is higher also due to a lower discount factor, since subordinated debt is a fixed claim whereas risky capital remuneration and reimbursement is conditional upon the private entity’s performance.

All these problems, formally affecting only the private counterpart and its banks, in practice indirectly reflect on public VfM, so requiring mindful and forward looking public choice.

Asymmetric subordinated debt (and leverage) occurs whenever the shareholders’ composition differs from that of the subordinated debtholders; in such a case, the latter, being typically represented by financial stakeholders (normally underwriting subordinated debt in bigger proportions if compared to equity) may be tempted to extract value from the private entity stressing the repayment schedule and imposing
to the private entity higher spreads, likely to reduce and delay the payable dividends. Competition between the cost of core equity (underwritten share capital) and the cost of quasi equity (subordinated debt) may well be functional to the private entity’s incorporation, even if it should be kept within reasonable limits, beyond which the whole private entity’s financial structure may be overcharged by improper implicit costs of opportunistic governance.

Cost of (privately) collected capital is hardly challenged by alternative public cost of debt, should the investment be entirely carried forward without any private engagement. Being the public counterpart by definition default risk free, its cost of debt collecting naturally embodies a lower risk premium charge, so affecting VfM considerations. As a matter of fact, public debtors are not totally free of any sovereign risk, especially if there are not fully legally backed by the State – as a lender of last resort similar to the Central Bank’s function within the banking system – providing limitless liquidity if required or if the State itself is somewhat exposed to potential default, this being a concrete and occurring issue.

The gap between public vs private cost of collected capital can be (substantially) reduced considering not only than the public counterpart may well, albeit less frequently, go bankrupt, but also subdividing private debt collection among different issuers and – mostly – backing it with public guarantees or by a predominance of less risky cold revenues, within the investment perimeter’s blending of hot and cold activities.

The aforementioned framework is well know, even if the impact of cost of private debt on public VfM is often underestimated, whereas the real impact of the recession still needs further investigation, with a little help from history, since during past recessions PPP/PF investments were still in their infancy.

5. Facing public budget constraints and credit crunch with innovative partnership models

Public budget constraints are increasingly tight, as a consequence of the W-shaped recession, started in 2008, with the big GDP downturn of 2009 and the even tougher one occurring in 2012-2013. Italy, due also to its high public debt and crumbling productivity, is particularly hit, with a paralyzing impact on public infrastructural investing.

Proper financing of the PF initiative depends on many complementary factors (to be discounted at a different risky rate), such as:

1. The price of the investment, in the form of the public cash contribution.
2. The availability payment, represented by the complementary annual rent paid to the private concessionaire, especially for “cold” project where market remuneration is insufficient; due to the Eurostat risk transfer rules, part of the availability payment (up to 50 percent or more) is conditionally subordinated to the effective operation and working of the investment and is so subject to fines if the service provided is inadequate.
3. The economic margin of the no-core services, within the investment perimeter, with a proper “hot/cold” blending of revenues and costs, depending on their market sensitivity representing a complementary resource inflow when the investment become operational.
4. The duration of the whole concession (project + construction + operation).
5. The (consequential) net amount to be financed.
(6) Other complementary issues, such as the Debt Service Reserve Account, the VAT facility or the public grant facility.

(7) The shareholders’ composition, with a proper blending of complementary players, such as constructors and engineering companies, management companies in different sectors. The shareholders’ composition may change across the (typically long) investment horizon, often with a relative predominance of builders in the first phase and of technical managers in the following phase. To the extent that different shareholders have asynchronous interests, they may be conflicting; for example, a typical builder may have a priority interest in maximizing the public grant (price of the investment), in order to promptly pay back most of its building costs, selling off its stake soon after the completion of the construction, while a typical management company is more concentrated on long term economic marginality of revenues and on dividend payments, possible only in the medium term, when free cash flow starts being accumulated.

A key role in Italian PF financing is increasingly taken on by Cassa Depositi e Prestiti (CDP), a joint-stock company under public control, which institutionally manages a major share of postal savings, which represent its main source of funding. CDP uses its resources to pursue its institutional mission to support the growth of the country, as:

• it has long been the leader in financing the investments of public entities;
• it acts as a catalyst for the development of infrastructure, providing viable finance; and
• it is a key player in supporting the Italian economy and national enterprise.

Acting as a pivot multi-purpose stakeholder, CDP is a long term – somewhat unassuming but in practice crucial – institutional investor, particularly fit for PF investments, with an essential role in financing public entities, often with bridge loans, particularly useful during the leverage peaking construction phase. CDP also acts as a powerful relational and factual facilitator in key – neuralgic – aspects represented by bankability issues. CDP may be considered as a sort of “Keynesian” Private equity player, within a broad financial framework where several stakeholders interact. Syndication and co-governance of risk may also come up as a further VfM positive externality, softening moral hazard and information asymmetries.

A PPP “financial picture” is tentatively represented in Figure 2.

Within this innovative partnership model, mitigation of debt-related agency problems becomes a likelier target, and the role of CDP may be appreciated even in relational terms, softening paralyzing and somewhat irrational mistrust between ailing banks and their needy clients.

The relative inelastic demand profile of infrastructural investments (Weber and Alfen, 2010, p. 21) makes them partially unaffected by economic fluctuations, also mediating peaks within a long time horizon; the risk profile, however, remains high. Closed-end infrastructural funds, still infant in Italy, face illiquidity risk, especially where there is no secondary market and exit strategies are hard to implement. Brownfield investments, refinancing existing investments, may well be linked to a birthing secondary market, where old and new investors may synergistically interact.

Contractual/institutional PPP, where the private SPV has a (even small) public share, which for example may conveniently be represented by CDP, may strongly...
contribute to reduce information asymmetries and conflicts, partially aligning the intrinsically divergent interests of the public partner with those of the public counterpart, with a cooperative Coasian nexus of more homogeneous contracts.

Institutional investors with long term perspectives and extended duration of their liabilities (e.g. pension and endowment funds, life insurances, etc.) may well replace or juxtapose banks in the long term financing, being less troubled by the central bank supervisory constraints that may prevent banks from being exposed in long term lending.

Selling the “jewels of the crown,” according to art. 143 of the Public Contracts Code, d.lgs. 163/2006, is another possible option for Italian public entities with a consolidated dowry of real estate properties unrelated to their core business and potentially dismissible. Real estate barters seem a fascinating but uneasy solution, since they absorb precious cash from the private counterpart, reducing the liquid component of the price and typically demanding further cash and time in order to make the property marketable. The balance sheet of the private entity also changes, with an asset substitution from liquid assets (the monetary price) to real estate fixed assets, which demand suitable and additional financial coverage. The very fact that assets become increasingly illiquid is somewhat softened by their collateral value, which may induce a partial switch from a cash flow based to an asset based financial model, departing from core PF philosophy. Real estate properties may be subject to possible securitization, also considering that closed end funds typically quote at a discounted NAV, which may be somewhat mitigated by a semi-open window exit, within an increasingly efficient secondary market.
Even shareholders may change, and real estate agents may become part of the team. Project bonds may also be issued in order to (partially) replace bank loans; this instrument may be used within a domestic or even better EU framework. Italian project bonds have been introduced by the “Development decree” of August 7, 2012.

EU project bonds, envisaged by “Europe 2020 Project Bond Initiative” (www.eib.org/about/news/the-europe-2020-project-bond-initiative.htm) aim at stimulating capital market financing for large-scale infrastructure projects in the areas of trans-European networks in transport and energy, as well as broadband telecommunications. The initiative is designed to enable promoters of infrastructure projects to attract additional private finance from institutional investors, such as insurance companies and pension funds, raising senior debt in the form of bonds. The EIB will provide credit enhancement in the form of a subordinated instrument (either a loan or contingent facility) to support the senior debt issued by the project company. The project company will generally be a PPP established to build, finance and operate an infrastructure project.

Joint impact on VfM of these innovative partnership models seems promising, even if it needs to be properly tested.

6. Testing some recent Italian normative changes: empirical evidence from healthcare PF investments

The so called “development decree” (l. 135/2012) and previous or further legislation under Mario Monti’s government have consistently affected the PF industry framework. The first Italian law concerning PF was issued in 1994 (L. n. 109/1994, “Legge Merloni”), afterward repealed and replaced in 2006 by the new “Public Contracts Code” (D.Lgs. 163/2006), according to the UE directives 2004/17/CE and 2004/18/CE; other modifications, specifically concerning PF investments, have been introduced with d.l. 70/2011, d.l. 201/2011, d.l. 1/2012, d.l. 83/2012.

Other changes concern more general issues, which may, however, affect even the specific PF industry, such as the general VAT rate (passed from 20 to 21 percent and possibly due to increase to 22 percent) or, from a macroeconomic side, trendy indicators such as the by now celebrated interest spread between Italian and German Government bonds.

A general comprehensive problem concerning these erratic changes is that they are hardly coordinated, with hidden side-effects uneasy to detect, monitor and fix.

In order to understand the impact of some of these changes on a PF economic and financial plan, an empirical testing has been conducted on a generalized sample, taken from a real PF investment case, concerning the construction and operation of an Italian public hospital (Moro Visconti, 2013b; Finlombarda, 2013), with an estimated investment cost of €100 million.

Following the “base” case, characterized by duration of concession of 20 years (after a typical three years period of project and build), VAT rate at actual 21 percent and “normal” spread of 300 bp of ten years Italian vs German Treasury bonds, seven alternatives, changing, respectively, the duration of concession (20 to 25 years), the VAT rate (from 21 to 22 percent) or the spread (from 300 to 0 bp) have been calculated, together with their impact on key economic indicators (net present value (NPV) and internal rate of return (IRR) concerning equity or the project; cover ratio; payback; leverage, etc.). Sensitivity evidence to the aforementioned changes is reported in Table I.

While the project’s NPV_{project} represents the cumulative value attributable to lenders and shareholders, and its IRR_{project} indicates the breakeven hurdle rate, residual equity indicators (NPV_{equity}, IRR_{equity}) show the shareholders’ remuneration.
Table I.
Simulation of an Italian healthcare PF economic and financial plan

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<td>Senior debt</td>
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<td>€45,486,449</td>
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<td>€46,873,725</td>
<td>€46,874,356</td>
<td>€44,814,103</td>
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<td>VAT facility</td>
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<td>Average inflation rate</td>
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Subordinated debt rate
VAT facility rate
Risk free rate
Market risk premium
NPV equity
NPV project
Payback period (starting year, 2013)
Average debt service cover ratio
IRR equity
IRR project
Ke
Kd
WACC
Net return (IRR project – WACC)
Leverage
EBITDA/financial charges

| Table 1 | Value for Money in Italian Project Finance | 1069 |
Confrontation between the project’s internal rate of return and the weighted average cost of capital (WACC), collected from shareholders and debtholders, shows its overall convenience for lenders and shareholders, whereas internal public indicators of convenience may be less clear-cut, since they traditionally embrace also qualitative issues, especially in sensitive industries such as healthcare:

\[
\begin{align*}
PV &= f(NR) \\
NR &= IRR_{project} - WACC \\
\text{NPV}_{project} &= \frac{CFO_1}{(1+IRR_{project})} + \frac{CFO_2}{(1+IRR_{project})^2} + \cdots + \frac{CFO_n}{(1+IRR_{project})^n} - CF_0 = 0 \\
WACC &= k_e \frac{E}{D_f+E} + k_d(1-t) \frac{D_f}{D_f+E}
\end{align*}
\]

where PV is the private market return (for the SPV’s shareholders and backing lenders); NR is the net return of project; CFO is the operating cash flow; CF\(_0\) is the initial investment; \(D_f\) is the financial debts; \(E\) is the equity; \(K_e\) = cost of equity; \(K_d\) is the cost of debt; \(t\) is the corporate tax rate.

WACC is the rate that a company is expected to pay to finance its assets, corresponding to is the weighted minimum return that a company must earn on existing assets to satisfy its creditors, owners, and other providers of sources of capital.

Empirical sensitivity testing – represented in Table I – shows that PF financial plans are – unsurprisingly – hardly sensitive to VAT rate changes from 21 to 22 percent, since most of the VAT problems, even in terms of financing with facility discounting the VAT credit, accrue for the private player during the construction, whose typical rate is 10 percent.

Temporal extension of the operation concession period from 20 to 25 years has a much bigger impact on economic and financial returns, which become more appealing for private players, so encouraging tender competition. Debate about optimal length of PF investments is hotly flamed also in Italy, being influenced by political reasons (and fear of too long “privatisation” of public services), economic considerations (the longer the concession, the lower its annual public burden, shifted to future generations) and financial aspects (banks supporting private bidders find it increasingly hard, due to recessionary credit crunch problems, to extend their loans, even if more liquid secondary markets or alternative ways of financing, driven by financial innovation, may help).

The greatest impact on PF economic and financial plans is, however, represented by the spread reset from 300 bp to zero: this hypothesis may apparently sound as science fiction in the actual EU context, but its application may not be so fanciful, if only the European Central Bank or other EU institutional authorities could issue infrastructural Euro or Project bonds or cover the guarantee risk. To the extent that selected infrastructural investments are crucial for growth, EU guarantees and co-sponsorship may well be repaid by shared common development. Quick-sandy recession, with its stubborn and hidden social and economic implications, actually proves far more expensive.

Being spread a by-product of recession, it may represent a rough estimate of its implicit differential cost in PF investments, discriminating within countries asymmetrically affected by economic downturns.

Table II contains a simulation of the (huge) impact of reduced spread (from 300 to 0 bp) or increased concession extension (from 20 to 25 years), on the public price of the investment.
Figure 3 shows how public grants decrease as a function of concession extension and debt spread.

Decrease in public grants – the monetary upfront price of PF – due to spread zeroing and concession extension look substantial, particularly if the two actions are combined, with consequent huge relief for public finances and their exhausted backing tax payers.

Nominal interest rate spreads are naturally linked to inflation, another sensitive parameter which greatly and positively affects private PF returns or, conversely, public costs (Moro Visconti, 2012).

According to a public spending review disposition (d.l. 95/2012), a cost reduction of 5 percent has to be levied by Public Administrations to supplies to the National
Healthcare System; application of this coarse ordinance is confusedly debated, whereas its impact on PF healthcare investments may be disruptive. Since private bidders in recession times increasingly look like angry and hungry wolves fighting for any left bone, any further decrease in their already tiny margins may push them beyond any economic and financial break-even, so ending up in a PPP game over.

And retroactivity of these norms, often envisaged by unfair legislation, may capriciously change the rules of the game when the match has already started. No wonder that investors, especially if foreign, are increasingly tempted to desert Italian tenders, in spite of EU attempts to harmonize legislation and procedures.

Public grants – representing the investment price – are strictly connected with project leverage and, consequentially, with some key ratios; for example, an increase of public grants, may reduce senior or subordinated debt, with a positive impact on leverage, EBITDA/financial charges, debt service cover ratio, IRR and WACC.

Public grants are also correlated with project length, keeping unchanged the other parameters: for example, an increase in public grants could allow a length shortening of the concession, without changes in some other parameters (availability payment, etc.).

7. Conclusions

PF is concerned with infrastructural investments with extended duration and long and complex gestation process, substantially illiquid due to their lumpiness and indivisibility. PPP projects are also capital intensive, highly leveraged and difficult to evaluate (Moro Visconti, 2013a) – all characteristics that make them intrinsically risky. When complexity grows, risk fatally increases and constant monitoring becomes more important. All these characteristics have an impact on both public VfM and private market returns, especially during economic downturns.

Fractal geometry of the age of deleverage, ignited by unprecedented W-shaped recession, disinflates PPP investments, so forcing to innovative and penniless solutions.

In many high public debt countries, such as Italy, EU limitations to public spending make Keynesian anti-cyclical measures harder to implement, so exacerbating recession and its gloomy and spiraling outcomes.

Solutions to mitigate credit crunch problems and overcome financial blackouts, which severely hamper infrastructural investments, may include:

1. project bond issues and initiatives, backed by the EU Commission (http://ec.europa.eu/economy_finance/consultation/europe_2020_en.htm);

2. direct participation to the capital of PF private entities by banks and other financial intermediaries, such as long-term closed end funds;

**Figure 3.**
Public grants as a function of concession extension and debt spread
intensified use of structural EU funds, to be combined with PPPs in a variety of ways, such as co-financing. The European Commission has made three different groups of instruments available to PPPs:

- financial engineering instruments that leverage private finance – in other words, enabling private finance to be used where it would not otherwise have been the case;
- sector-focused grants that incentivize promoters to undertake projects in the pan-European interest; and
- grants that support the cohesion policy of the union and individual EU Member States.

Other complementary improvements may derive from:

- A wider PF investment perimeter, expanding the area managed by the private partner, so increasing its expected margins and flows, with a correspondent decrease in public contribution.
- Fiscal incentives (tax reduction) to the private concessionaire, with a correspondent decrease of public grants, to be agreed upon within the EU, so as to avoid any infringement of State-aid vetos; incentives may concern VAT rates (applying for instance the 10 percent Italian rate, traditionally used for construction operations, even to invoicing of availability payments, instead of the standard 21 percent rate) or income tax grants/deductions.
- Real estate swaps, with a barter between “jewels of the crown” public properties and new facilities built by private entrepreneurs, within a PPP framework; to the extent that barter is a component of the price paid to the private investor, many complex consequences arise, concerning for instance their intrinsic illiquid nature and the opportunity of including in the shareholders team even professional real estate developers.
- A more liquid secondary market, still in its infancy in Italy and, due also to the contingent gloomy financial outlook, uneasy to develop. Any incentive which may help its growth seems more than welcome, especially for constructors, which are typically a key shareholder but whose mission is hardly concerned with the operation of investments. To the extent that specific investors uninterested in operation are able to disinvest their stakes, they may consequently be able to participate to new tenders, concentrating in their core business and setting free otherwise frozen financial resources.
- A more synergistic composition of private shareholders, till now mainly represented by constructors. Constructors, as already mentioned, have a prior interest in building and then selling their stake, typically at the beginning of the operation phase, whereas companies focused on operation are more likely to have a later interest in running the private company, possibly together with financial shareholders with a long term investment horizon, such as pension or endowment funds.
- PPP and public procurement databases, so as to share economies of experience, characteristics on qualifications of projects and private bidders, etc.
Unreliable and short-sighted legislation and regulation, often driven by biased and confused ideology, and consequent unfriendly business climate, represent a major value destroying criticality, which may frighten investors, so shrinking competition, effective procurement and consequently VfM. Continuous erratic modifications and interpretations, dangerously exposed to the edge of chaos, make the whole legal framework uneasy to understand and deal with (Abdel Aziz, 2007), especially for foreign players. As a consequence, unwise and ephemeral legislative risk, pushed by miscalibrated and contingent emergency reasons, typically creates unwanted and hidden structural damages, up to unfair and opportunistic private wealth expropriation. The institutional and legal framework may so be severely puzzled, arbitrarily changing the rules of the PPP game, making it unfair and unpredictable for shaken investors, whose long-termed strategies, coherent with the useful life of PF investments, are unavoidably based on stable assumptions. Uncertainty and confusion typically bring to abandonment of projects of either the public or the private side or, even worse, to long termed PPP “guerrilla” along the life of the concession, with huge and sunk social costs. These institutional and legal aspects, whose implications are somewhat under investigated in the VfM literature, need additional scrutiny and may represent a new research stream, encouraging “cheap” solutions to atavistic criticalities and easing international comparisons and global competition, especially for bigger PPP/PF investments. “Soft” qualitative issues, such as stakeholders’s composition, also need further examination, even considering flexible entry and exit options, since the stakeholders’s mix is well likely to change during the (long) life of PF/PPP investments. Bridging the theoretical and methodological gap between quantitative and qualitative aspects of VfM still proves a daunting challenge, with insightful practical implications, starting from the definition of the investment’s boundaries, up to the settings of the public tender rules, so crucial for VfM optimization. Further investigation is needed even in this slippery area, shaping generalized models, fit to became industry specific, in an increasingly global playfield, still looking for shared best practices. Tips for further research also include pro-growth tax and budgetary policies, risk minimization issues, pan-European initiatives with larger economies of scale and experience, and other forward looking synergistic targets, in order to make PF cheaper and more flexible and effective, so naturally enhancing its VfM.

References


Further reading


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