

A NEW APPROACH TO THE FINANCING OF PUBLIC INFRASTRUCTURE FUNDED BY USER CHARGES

Abstract

A major impact of COVID-19 has been a significant increase in the amount of borrowing by the UK government. This will likely have reduced the fiscal headroom available to the government to deliver its desire to 'level up' through an expansive infrastructure programme. Government could, for instance, launch one and then be forced to retrench or even abandon it, if say, the markets refused to buy up government gilts at current yields (although at the moment over 80% of new gilt issues are being purchased by the Bank of England, potentially creating inflationary risks). Despite historically low public borrowing costs, there are inevitable limits to the amount of borrowing possible if such market confidence in the UK is to be maintained (even though it is not absolutely clear at what level borrowing becomes problematic). Markets will, however, be rightly concerned that without fiscal discipline there is a risk that debt ratchets up, not only creating an increasing burden for future generations, but creating re-financing risk, in which such a debt burden can only be refinanced at increasingly high interest rates.¹ This would be greatly exacerbated in the event of higher rates of inflation.

An approach that has not been explored is to ring-fence public borrowing for infrastructure, particularly transport and other infrastructure which is paid for predominantly by user charges, rather than by tax receipts (and borrowing). There is a case that this form of public infrastructure should be accounted for and financed differently, not just relative to what is now defined as current expenditure, but also from capital expenditure which does not have a significant user charging component. This is because such infrastructure is less dependent on budgetary resources which are inevitably rationed, with much greater potential to be self-funding, especially where the costs of the infrastructure can be spread out over many years. Rather than rolling over this debt, it can be repaid. By doing so, this creates a financial discipline that can provide markets with confidence and can potentially reduce the need for its rationing.

There are two ways in which this could be realised. One option is to issue traditional government bonds to capitalise a UK National Infrastructure Bank (UKNIB) which would provide amortizing loans to infrastructure projects. At the moment, there is scant detail on how this will operate, but it would seem that it would not just be replacing the EIB which is essentially a low risk, volume lender and instead would seek to take catalytic, higher risk positions in infrastructure projects. This would leave something of a gap in the market; the EIB has traditionally provided up to 50% of the senior debt requirements of many economic infrastructure projects as it has highly efficient pricing (this limit being set to help limit the crowding out of private lenders and debt investors). Whilst the private sector most likely will step in to fill this gap, it will be at a higher cost affecting the affordability of projects. Another approach would be to issue a new form of amortizing public infrastructure bond, which would involve the bond being paid back, rather than following traditional public financing approach of rolling over debt. By mimicking the approach of private sector infrastructure bonds, a repayment discipline will be applied to infrastructure financings. This would balance private sector financial discipline with the attractive costs and tenor of public borrowing.

Introduction

This note sets out a rationale for separate government accounting for, and financing of, new public infrastructure that is predominantly paid for by user charges, rather than taxes and borrowing. The aim of this is to reduce the potential need for rationing, especially given the limits to fiscal headroom arising from the COVID-19 fallout, and to

¹ Whilst some of the value of this debt can be inflated away, close to [30%] of it is indexed linked.



combine the cost and tenor advantages of public finance with private sector infrastructure financing disciplines. The note explores:

- The advantages of, but also the risks of public borrowing for infrastructure.
- The rationale for treating public infrastructure that is predominantly funded by user charges separately from other forms of government expenditure.
- The opportunities this creates for other financing approaches, which are more in line with how private financing of infrastructure works, but which benefits from both lower public financing costs as well as longer debt tenors which means the costs can be repaid over many decades, keeping financing costs low in any one year.
- Why such a repayment discipline can help reduce the likely future rationing of public financing for such infrastructure, which will likely be managed through annual deficit and cumulative debt to GDP ratios.

Background and context

There are good reasons for public investment in infrastructure, but the likelihood is that in future it will need to be rationed...

There is a broad consensus that investing in infrastructure makes good sense as it will strengthen the productive capacity of the UK economy. Well-chosen infrastructure projects could assist the government's levelling up agenda as well as performing a counter-cyclical role in mitigating the fall-out from COVID-19. Government can currently borrow at extremely low rates, the benefits of which can be passed on to infrastructure projects. This differs from private financing which applies a risk margin to borrowing costs (although government can also adopt this approach as it does, for instance, when pricing guarantees issued through the UK Guarantee Scheme).

The benefit of public financing is not limited to its low cost relative to private, given a sovereign borrowers' high credit ratings relative to those of financial institutions.² The UK government can borrow extremely long term at fixed rates, with over half of outstanding gilts having maturities of over 15 years, with a significant proportion of these being between 30 and 50 years. This means that the interest cost can be locked in at the time the gilt is issued.

The problem is that there are inevitably limits to how much government can borrow. Whilst at what level this begins to bite is unknown, the decades long low growth rates of Japan and Italy, two OECD countries with some of the highest public debt to GDP ratios, can potentially be seen as what can happen with significant public debt overhangs. This can create something of a vicious cycle in which lower growth reduces tax receipts, resulting in higher levels of borrowing and even lower growth. Whilst countries such as Japan have high levels of household savings which can be used to fund deficits, the UK is arguably doing so by creating ever increasing amounts of liquidity through the Bank of England's quantitative easing programme, with the ever present risk of an inflationary fallout from this.

At the moment government is borrowing hundreds of billions to underpin the economy, for instance through the furlough scheme. Even with a post-COVID strong recovery, the likelihood is that it will need to keep borrowing more to fund increased unemployment benefits at the same time as its tax receipts will be declining.

Put together, a range of risks are being created. Where markets require higher risk premiums to compensate, the share of the government budget going to interest payments will begin to increase. This is likely to reduce the

² It should be remembered, however, that private and public borrowing are not strictly comparable. The costs of borrowing can be split into two. First, there is a 'wholesale' or 'base' component reflecting the credit quality of the entity providing the finance; for instance, government or a bank. Second there is a risk margin reflecting the risk of the infrastructure borrower. Whereas a bank lending to infrastructure will add a margin to its own borrowing costs to reflect its intermediation costs, the risk of borrower default and a return, public financing does not include any form of risk pricing, the risk of default effectively being socialised amongst taxpayers.



headroom available for borrowing for what are essentially elective uses of resources, irrespective of the value of committing them to infrastructure investment.

Key concepts

Private financing is much more disciplined than public with a clear distinction between funding and financing....

Investors in government debt issues rely on the UK government's ability, underpinned by the productive capacity of the UK economy, to pay them interest and repay principal. Investor confidence is maintained by governments setting out limits on, for instance, how much will be borrowed in one year or cumulative debt totals relative to GDP. Over the years some measures have also taken into account what the borrowing is for, differentiating between capital and current expenditures, with infrastructure falling into the former categorisation.

Government borrows by issuing gilts which effectively pay for the infrastructure to be developed, constructed and implemented as the revenues required to pay for these phases in the project cycle arise. Such gilts are typically long term and when they mature, for instance after 30 years, they are refinanced through the issue of new gilts. Interest and ongoing operational costs are either paid from user charges, government tax receipts, or indeed, through more gilt issues. There is no explicit repayment of the debt associated with the infrastructure.

Public finance does not therefore really differentiate between the *paying for* and *financing of* infrastructure (public borrowing is effectively used for both); whereas this distinction is a crucial distinction in the case of private financing:

- Private *financing* comprises the debt, equity and other financial instruments that allows the lumpy investment to be paid for over many years.
- Infrastructure *funding* comprises the payments, either from government or user charges such as tolls, which remunerate and repay such capital, as a combination of dividends, interest and capital redemption, typically over many years (as well as the ongoing operational costs of providing the infrastructure service).
- Debt can either be repaid as a bullet payment at maturity (as in the case of a corporate bond) or else through a series of amortized repayments (in the case of project loans or project finance bonds).

Investors in the debt of infrastructure businesses (corporate financing) and projects (project financing) look to a mix of the cash flows generated and / or net asset value of the company to repay their investments and security in the event of default.³ *Project financed* infrastructure has a clear debt repayment profile, in which cash is returned to investors and lenders according to a clear amortization schedule. Different finance ratios mean that sufficient cash is kept in the project company to ensure that debt gets paid in different downside scenarios. *Corporate financing*, which like traditional public financing, can also involve the rolling over of debt requires the infrastructure company or utility typically to have an investment grade credit ratings which, in part, involves the existence of sufficient collateral that can be drawn on in the event of unforeseen events (for instance, subsidiaries and other assets can be divested to provide the liquidity required to reimburse debt providers).

Current public fiscal management distinguishes between current and capital expenditure, with infrastructure falling into the latter. However, differentiating between infrastructure largely funded by user charges and infrastructure funded by taxes could be a more useful distinction...

Currently, government accounting policies distinguish between current and capital expenditures. The construction of both economic and social infrastructure falls into the latter category, however, they can have very different characteristics as well as what can be done with them in the event that government faces a need for liquidity. If we take a hypothetical public road tunnel, over an economic life of, say, 100 plus years, this could probably be largely, if not totally, paid for by tolls (with many bridges and tunnels being funded in this way, even though there can be

³ Sometimes it is providers of guarantees who rely on these.



sensitivities around tolling). In a scenario where government needed funds, such an asset could be divested with a private sector owner taking over the responsibilities of the state.

This is in clear contrast to a public hospital which, apart from parking charges, is largely funded out of the NHS budget and which would never be divested. This is arguably quite an important distinction which goes beyond the immediate accounting one. But even in terms of accounting, there is a case for ring-fencing such assets which have a realisable asset value together with their associated financing liabilities.⁴ Such expenditure would be a separate class from current and 'protected' social capital expenditure. The approach could be applied to any public asset which (i) is largely funded through user charges and (ii) has the potential for divestment, if required.⁵

Most infrastructure that is fully funded by user charges comprises utilities, in which operational and financing costs are fully covered by charges. The private companies that supply these services are often traded between different groups of investors; for instance, once group may wish to free up capital by such trade sales and in the event of payment defaults, lenders and bond holders have creditor rights over the assets. But as they are already in the private sector, they sit outside the scope of this new proposed classification.

At the other end of the spectrum social infrastructure such as public hospitals, schools and prisons are all funded out of taxes (and borrowing), save for relatively small proportions of total costs.⁶ As it would be politically unacceptable to divest these types of assets, although spending on these assets is accounted for as capital, in essence it shares much in common with current expenditure and arguable should therefore be managed in more traditional ways.

In the middle of this spectrum lie many transport assets. In some cases these are wholly funded by government, such as the vast majority of roads, whereas others are predominantly funded by user charges (especially toll tunnels and bridges), but also national railways and metro systems which have mixed funding. In many countries motorways are funded by user charges, although the companies that operate them are publicly owned. It is these types of economic infrastructure, in which there is a majority of user charging, such as toll roads, bridges and tunnels, and rail (including Cross Rail and HS2), which could be ring-fenced and financed differently. For instance, in the roads sector this could be achieved through greater user charging.

Proposed approach

If the distinction was applied, it could also create the potential for a different approach to public borrowing, including the amortization of debt as an alternative fiscal discipline...

As with private infrastructure the accounting approach identified creates the potential for making a much clearer distinction between the funding and financing of public infrastructure. The funding would be largely based on user charges; however, this could be supplemented by government budgetary expenditure either as a one-off upfront grant, or as an ongoing support payment. This can be seen as a subsidy, or 'viability gap funding'.⁷

Similarly, rather than being part of total government borrowing, the borrowing that is effectively being paid for out of user charges would be hypothecated to the ring-fenced account. However, there is the potential to go beyond hypothecation to a different treatment, in which the debt was amortised, that is repaid, rather than being rolled over, which would act as an alternative form of financial discipline more in line with private sector project financing. This might potentially reduce the extent of the borrowing constraint faced as investors would see a clear repayment profile.

Because the borrowing term is so long it means that only a relatively small amount needs to be repaid off in any one year. When combined with low interest rates this means that in the case of current borrowing, interest and

⁴ There are arguments that in focusing purely on the UK's (debt) liabilities, the asset side of the national balance sheet is being ignored. Whilst this may be true, for the reasons given, although a hospital is a national asset, it is not a realisable one and therefore does not provide the same financing security that the tunnel example would.

⁵ Note 'potential for' – this does not necessarily represent a policy.

⁶ Private schools and hospitals are different too.

⁷ Viability gap funding covers the difference between the level of infrastructure provision that is affordable through user charges and what is desirable from a societal perspective.



capital can be repaid for pretty much the same amount that would have covered only interest before the Global Financial Crisis, after which international interest rates collapsed as central banks embarked on large scale quantitative easing. There is a now a clear current opportunity to lock in the low rates that currently prevail.

UKNIB

The use of amortizing bonds could be complementary to the role played by the UKNIB. One way this might work would be for the bonds to be used for less risky public infrastructure projects, with the UKNIB taking the lead on more complex projects. In addition to this, where the UKNIB was focused on such riskier financings, once operational it could seek to exit and in doing so recycle its risk capital. At this point, such amortizing bonds could be issued to help reduce the costs of the infrastructure, essentially fulfilling the role traditionally played by the EIB, which typically has been a low risk, volume, long term lender.

Irrespective of the approach, whilst government could pass on the tenor benefits of its borrowing, there are strong arguments that it should apply a risk reflective margin, to reflect the risk that tax-payers are taking in supporting infrastructure projects, for instance the considerable construction risk, manifest in higher than expected costs as well as delays (which delay the payment of customer receipts).^{8 9}

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⁸ The UK government will need to borrow to provide the paid in capital to finance the UKNIB.

⁹ This could take the form of a flat margin on all debt, or differential returns on, say government equity and debt participations. But these are detailed structuring points.