Productivity Commission

Finance for Infrastructure Review

Submission by VFT 2 Project

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With respect, this is a timely study by the Productivity Commission as it underpins the Prime Ministers' endeavours for Australia to become a world leader in infrastructure at the G20 Meeting in Brisbane in November 2014.

This submission relates primarily to very large private infrastructure projects which take many years to construct and to very long term planning for population increase. Such projects may need tailored financial arrangements.

Within this context, the private VFT 2 Consortium Project for High Speed Rail/Fast Freight Rail between Melbourne, Sydney and Brisbane is a specific, possibly the only example. It also fits with the Prime Minister's infrastructure ambitions. Australia may become the 'Champion for Greater Growth of World Prosperity' at the G20 Meeting. The role would demonstrate leadership with world best practice in all aspects of generating prosperity as an example for other countries.

The significance of the +$100b VFT 2 HSR/FFR Project is that it could be the signature Australian infrastructure initiative to give the Champion role a solid physical foundation. It would also give the economy a strong stimulus by creating many jobs along the east coast as a result of large private, non-government investment. Much of the investment would be from overseas.

VFT 2 Project construction and operation, and government and union cooperation with the project would each demonstrate world best practice. Arrangements for private infrastructure finance for the Project would also be world best practice.

Further details of the VFT 2 HSR/FFR are attached. They show that the Project is more than just a railway. It has implications for the development and population growth of Australia for the next 100 years.

Should the Project go ahead, subject to private enterprise feasibility study, it may take 10 years to construct, including the study, given world best practice.

Large scale, long term 30 year finance for the Project is likely to suit Superannuation Funds once the business has been operating successfully for three years. The Project would be refinanced at that time. Other finance must be arranged for the first 10 +3 = 13 years of construction and operation or say up to 15 years. Banks tend to limit their lending to 7-10 years. The issue then is how to finance the first 15 years of this major Project?

One possibility is that the significance of the Project to the Federal Government is sufficient, given its Champion role, for it to provide a government guarantee of private infrastructure finance that would cover the full 15 year period. It would need to induce private enterprise to take up the risk involved in the Project. It would want to keep the cost of such a large project off the budget and avoid increasing government debt by having it built privately rather than by government. It also needs a large injection of private investment to stimulate the economy to above trend level of growth.

Comments on government guarantees are set out in the attachments.

There may be other forms of financing the project for 15 years at world best practice. Government guarantee of private infrastructure finance may be an equally good means and also best suit economic management and Government budget considerations.

Determination of the best means of financing large scale private infrastructure investments is the outstanding issue for the Government at this moment for demonstrating its infrastructure credentials, for moving the economy forward and for the future prosperity and liveability of Australia.

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The Meaning of HSR and FFR

High Speed Rail and Fast Freight Rail have several layers of meaning for those involved, their customers and for Australia which will have an impact on success. These layers should be taken into account and kept in mind throughout the feasibility study and implementation of the Project. Their meaning informs the values, culture, strategy, structure, processes, brand and public relations of The VFT 2 Project management and the policy of Governments.

Undertaking HSR and FFR is a practical, large scale and complex initiative. The VFT 2 Project will only be taken up and financed by a private enterprise consortium when the private feasibility study confirms its anticipated profitability, financial viability and bankability. It can only achieve this with integrated, thoroughgoing, fast-tracked cooperation of Federal, State and Local Governments.

At a deeper level, The VFT 2 Project contributes effectively to major cost reduction and improvement in productivity in the Transport Industry, which in turn significantly increases the international competitiveness of other industries. It provides non-mining jobs and indirect employment, apprenticeships and greater skills and expertise for Australia. It is a pathway for diffusing technology. It stimulates innovation and encourages entrepreneurship. It is a vehicle for greater foreign investment in Australia. It underpins the economic growth and flourishing prosperity of Australia.

At the same time, The VFT 2 sustains Australian liveability. It provides a means for conveniently, economically and effectively distributing the growing population over a wider area rather than massing in the main eastern cities. It reduces and holds back growth of congestion. It creates new liveable cities. It links new homes with jobs through close-by public transport. It provides human scale, compact high quality developments by building over rail in new and old cities. It economises on cost of public services infrastructure. It reduces the pain and cost of road accidents. It is environmentally friendly as it reduces energy use and co_2 production. The VFT 2 along the east coast facilitates sea-change, tree-change and city-change. It creates a cultural, innovation and trade route connecting people and goods up and down the coast.

At the deepest level, a project of such scale, scope and impact as The VFT 2 is about contributing effectively to the longevity of Australia's prosperity. Australia is the wealthiest country in the world and also the most liveable. Historically, most city-states and nation-states that have risen to prosperity have later declined. Their work ethic, entrepreneurship and international competitiveness faltered as self-satisfaction and complacency set in and self-discipline dissipated. Consumption rose and investment fell. They ceased to strive sufficiently for betterment. The VFT 2 Project, which meets the profitability test and implements resolve, is integral to Australia's ongoing prosperity and liveability as the population increases 60% in coming decades.

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Two Issues for Australia

Two vital underlying issues have a growing impact on the Australian economy: transport cost and population location. Inter-locking resolution would significantly improved productivity and increase international competitiveness. These would lead to greater quality of life and higher standard of living for Australians. Consequently, the continued liveability of Australian cities would be ensured.

Some 18m or 82% of the Australian population of 22m in 2011 lived on a long narrow 1800km strip running north/south along the east coast within about 100km of the sea. The population is highly urbanised in three major cities, Melbourne, Sydney and Brisbane; in four small cities, Newcastle, (Wollongong), Canberra and Geelong; and in four concentrated regions, Gippsland, Central Coast, Gold Coast and Sunshine Coast on parts of the narrow ribbon. Sydney is in the middle, 900km or so from each end.

The east coast population is projected to increase by 10.4m or 58% over the next 40-50 years, 65% in three of the most liveable cities in the world at the moment, and the regional population by 48%.

The long narrow strip is ideal for sea and rail freight. However, coastal sea freight is almost non-existent. Rail freight is extremely small. Instead, very high cost road freight is the main mode with about 95% of the market. The large population increase means a big expansion of road freight, already part of the biggest industry in Australia in terms of percentage of GDP. Total transport is 3 times the US percentage of GDP.

Road freight is more economically suited to a close aggregation of nearby cities rather than cities located on an 1800km long strip, the dual highway of which is not yet complete. In Europe most of the capital cities and markets are concentrated within a radius of 900km around Brussels which is ideal for road freight.

Fast Freight Rail may more than halve cost and time of inter-state road freight along the east coast strip.

Passenger rail between the major cities is old, slow, infrequent and expensive. It is clearly uncompetitive with air, the main inter-state passenger mode. Australia's small population times its high propensity to travel gives the fifth busiest air route in the world. This is sufficient base market for new world class rail.

Population increase could be decentralised to the regions between the major cities within 30-60 minutes commuter time to their CBDs by High Speed Rail. Cost increases for inter-city travellers could be held down in the long term by competitive HSR along the strip.

Essentially, the choice is to build 6 new cities of about 1m people in the regions around the three major cities along the HSR route, or build the equivalent 6 new cities within the boundaries of the three cities. They become mega-cities with liveability destroyed by exponential congestion growth. The choice is either population increase in cities kept to say 28% and regions expanded to 105%, or 65% and 48% respectively.

HSR would sustain most liveable cities rather than see them wane without it. Air and road, even subsidised, could not economically or competitively service mass commuting from 2-300km into CBDs as HSR would.

HSR and FFR could be built together side by side along the strip for a lower capital cost than if built separately. The net income of the joint investment would be substantially higher. If constructed quickly without loss of quality, the accumulated interest expense would be lower and net cash flow from operations higher. Value capture form these new world class railways would probably pay for more than half the capital cost to reduce net investment to a manageable level and give a higher return. They would be a practical, viable and bankable private enterprise consortium project, subject to feasibility study.

HSR and FFR should be built privately and commercially with government cooperation from the start because if government built they would be privatised eventually anyway. Either would benefit Australia.

Population Increase, Congestion and Railways

Australia faces a tipping point. Population increase is overtaking the structure to support it. The population increase is inescapable. Either structure is built up or liveability declines.

Major Australian cities are amongst the largest, lowest density, most liveable and wealthiest in the world today. They are all on the sea and near beaches. All have good climates and long summers.

Melbourne is the most liveable city in the world according to The Economist Intelligence Unit. Sydney is 6th, Perth 8th and Adelaide is 9th most liveable city. Brisbane is not far behind and will catch up. Sydney with a population of 4.6 m and Melbourne with 4.1 m are the only large cities in the 10 most liveable. The average size of the top 10 cities in the world is 1.8 m. Brisbane is 2.1 m. Cities with larger populations and more congestion are generally much less liveable. London is ranked 53rd and New York is 56th. Melbourne and Sydney are exceptions. They are challenged to remain most liveable.

Many Australians are against population increase. They do not believe that government can or will control congestion and consequently their liveability will decline materially as the population grows. They are troubled by the present level of road congestion in cities and worried about the future. People have a sense that size of cities threatens their most prized liveability.

Australians are reported to be the second wealthiest people in the world after the Swiss. Australians celebrate and enjoy their large homes and facilities, their life-style and prosperity. They want them to continue into the future. Maintenance of standing and wealth is a powerful human urge.

Houses and flats in Australia are far bigger than in Britain, Europe and Asia. Average size of houses being built in Australia is larger than in America. Australian houses are on bigger blocks of land and cities cover larger areas which results in lower population density. This adds to their liveability until population and city fringe growth become counter-productive when expansion of public transport does not keep pace, so there are more cars. Congestion grows noticeably and liveability shows signs of stress, especially in outer areas.

The population has grown rapidly by 16 m to 23 m since the 1940s. It is projected to increase by 60% or another 15 m in the next 45 years. The population of both Sydney and Melbourne may grow 15% or 600,000, the size of a new city every 10 years. They would grow from 4.6m to 7.1m or +2.5m, and 4.1m to 6.6m or +2.5m respectively in 45 years. Congestion will increase exponentially, if nothing else changes.

Congestion in Melbourne is estimated to cost the community $3b pa today and is expected to double to $6.1b pa in 2020. If the same cost of congestion is assumed for Sydney, though it is probably more, the total would be $6b pa now and $12.2b pa in 2020. Cumulative cost of congestion over seven years is roughly $63b or more than half the cost of building High Speed Rail (HSR). Over 45 years it costs much more than HSR.

Population increase is virtually unstoppable. However, congestion is not insoluble and liveability can be maintained. There are solutions and HSR is central to them jointly for Melbourne, Sydney and Brisbane.

The Australian population is projected to grow to some 62 m by 2101, to the size of the UK and half that of Japan today. The prospect of Melbourne and Sydney each accommodating 60-100% more people, growing by 600,000 per decade to the size of London with its lower liveability now, should require consideration of the next 50-100 years. Brisbane has proportional challenges. New railways are lumpy investments, which made soon can provide extra capacity for all this period and ensure continued future liveability.

The present approach to city development is not so long term. Essentially it is to continue fringe city expansion, some increase in density at present dwelling size, modest suburban rail upgrade and no HSR. A longer term variation may add HSR in 45 years time. Congestion would increase and liveability decrease.

An option is to halve new dwelling size, double the density in the same city area, improve public transport and maybe add HSR later. This is the "European" model. Congestion would grow and liveability decline.

The choice is up or out: growing squalor or isolation, or both.

A better solution takes advantage of the size, low density and wide suburban rail network of Australian cities. There are a number of parts all including dwellings of the usual size. Part 1 is the building of some high rise blocks of flats in and around CBDs and rail terminuses, provided they do not crowd out new high rise office blocks needed for long term business growth. The same applies to other business concentrations.

Part 2 is medium density/four story housing for up to half a million people built above (non-operating) HSR and upgraded and expanded suburban railway tracks buried in adjacent trenches in inner-city areas, all within walking distance of suburban stations and rail access to jobs. The trenches would be for up to 30 km through suburbs on each side of the city. Additional higher rise flats would be built above suburban stations. High rise offices and flats would be built above HSR and suburban rail stations at outer suburban activity centres connected to the CBD. Extensive new inter-state freight rail terminals at ground level in suburban areas would be built over with low to medium density housing to form new activity centres connected by suburban rail. Eventually, almost all suburban railways could be buried and built over.

Part 3 is low density in-fill housing in the suburbs, particularly near to public transport. There would be some limited outer fringe development where public services have already been installed, especially near extensions of suburban rail.

Part 4 is a key contribution to the solution. During the next few decades six new, highly liveable, lower cost cities of 1 m people each would be built in sparsely populated regions within 30-60 minutes HSR commuting time of CBDs. People and hi-tech industry would be connected by high speed telecommunications. There would be at least one new city on each side of Melbourne, Sydney and Brisbane, reducing their population growth by 2 m or 6 m people in all. At the same time, substantial growth of existing towns up to 1 m along the HSR route would be encouraged. In this way, regional population along the east coast would grow much faster than urban. HSR would prevent the lower liveability expected of larger, more congested cities.

HSR is the crucial infrastructure on which decentralisation relies to grow regions, moderate congestion of the major cities and maintain their liveability. It also improves prosperity by supporting more inter-connected cities which are the source of greater innovation and productivity. Small cities provide 70% of growth in the US. None of this has been or could be provided by air or road or existing inter-state rail.

Some may dismiss HSR as an unrealistic project that the country cannot afford, but this regards it simply as a railway and neglects its broader implications. It would cut costs, increase productivity and create many jobs.

There is no doubt that HSR is practical and proven. A major share of business on the 5th busiest air route in the world supported by a population of 23m with a high propensity to travel and which is growing rapidly is sufficient for profitable patronage of HSR. California is considering HSR between its San Francisco and Los Angeles city pair. It has a similar population, but not a 60% increase nor one of the top 5 busiest air routes.

HSR is not only about passengers. It is about redistribution of the Australian population.

Transport is the largest industry in Australia as a percentage of GDP. It is 2½ times bigger than the American transport industry on a comparable basis. The Australian road transport industry alone as a proportion of GDP is almost as large as the whole of the American transport industry as a proportion of GDP.

East coast inter-state freight is dominated by road transport with over an 80% share of the biggest general freight market in Australia. Road freight is very high cost and high co_2 production. Population increase and growing congestion increases the cost. The antiquated inter-state coastal railway cannot compete with road.

Construction of new fast freight rail (FFR) tracks next to HSR tracks at the same time would transform the economics of these world class railways. A profitable FFR system between Melbourne, Sydney and Brisbane would lower freight costs substantially, improve international competitiveness of Australian industry and increase Australians' prosperity. It is critical infrastructure for the economic development of Australia.

FFR is not only about freight. It is about redistribution of the freight task to cut Australian transport costs.

The advantage of the HSR and FFR concept is that it would provide large property value capture to finance their construction. Capture of value created by the new railway system could potentially off-set more than half their capital cost. Net investment would be far lower. Accumulated interest expense during construction would be reduced considerably, which would result in a much higher net cash inflow once in operation.

The concept may be illustrated by some rough 'broad brush' scaling figures. The value created by HSR would be equivalent of about 6km^2 of new inner-city serviced "land" above the tracks into and out of each city or 18km^2, valued at say \$2b/km^2 or \$36b net. Buildings on the new land may have a net value of another \$36b.

Net value of land around six outer suburban activity centres, two in each city, on the HSR route may be \$2b each or \$12b. The core value of six new cities on the HSR route, two near Melbourne, Sydney and Brisbane, may be \$10b each or \$60b. The net value of new towns around regional HSR station may be \$1b each for say 10 stations or \$10b. The net value of "land "created above the three city inter-state FFR terminals may be \$2b each or \$6b. Total property value capture created could amount to about \$160b.

The capital cost of the HSR according to the Federal Government HSR Study Report recently released is \$114b. Add to this the cost of building over inner-city tracks of some \$36b and the cost of fast freight tracks of say \$40b, the total capital cost may be about \$190b.

Net investment after deducting value capture from capital cost on these illustrative numbers would be \$30b; within reach of private enterprise to wholly finance. Japan may be in position to partly build and finance it.

The Government should not impose capital gains tax on private HSR, as it would not go ahead. However, the Government could collect 30% CGT on \$160b or \$48b, but leave the proceeds in the project as an interest free loan, an investment of funds that it would not otherwise receive if there were no HSR. There is incentive for Government to promote construction of the railways and the value capture they create, soon.

The whole project would be built privately within 10 years, so population would not grow too much in the meantime. If HSR is not completed for 45 years by government, it will grow by as much as 15m mostly in the cities which would experience exponential growth of congestion. Fast construction reduces interest payable.

Certainly there would be considerable disruption during construction, mainly in the cities where congestion is worst. Population increase is inexorable, the threat of greater congestion is imminent and the concern for liveability so imbedded that the case for HSR and FFR is compelling to the people. They would support and be tolerant of serious action now that would maintain their future liveability and prosperity, and cut congestion. They would know it is a major once-only infrastructure project that cannot be approached incrementally like roads, and that disruption would be temporary and worthwhile. It is achievable by a private enterprise consortium with the cooperation of government, subject to private feasibility study.

To not build HSR soon runs the risk of condemning many Australians to live in their lifetime in mega-cities with gross congestion and damaged liveability, regretting the lost standing, wealth and benefits of the most liveable cities in the world, and knowing these need not have been lost with population increase.

Inter-state Road Transport in Australia

Inter-state road transport in Australia is very efficient and competitive. It has gained a really remarkable 69% share of the total inter-state freight task. It dominates the north/south route on the east coast where its share of the market is probably much higher, may be +80%. This route carries the most general freight. Rail has 24% of inter-state freight market, mainly on the east/west route. Sea has the remaining 6%.

The Australian road transport industry sales are estimated at $48b in 2011/12 by Ibis World. If purchases of fuel, of say, 30% or $14.4b are deducted, indicative value added would be $33.6b. Road transport was approximately 50.4% of total transport industry value added of $67.7b in 2010/11. Road transport is about 2.5% of Australian GDP of $1,320b, a surprisingly high proportion. Remarkably, the 2.5% Australian road transport proportion alone is 86% of the whole US transport industry proportion of 2.9% of American GDP.

Australian inter-state road freight is world class. Many overseas people visit to learn about it. However, it comes at a high cost. Road is very expensive. It has high equipment, labour and energy costs. These high operating costs are passed on to industry and consumers. Competition from inter-state rail is clearly not strong. Existing east coast rail is old, more expensive and significantly slower. Trucks produce substantial co_2, but it is not taxed. Road transport does not pay its way on road construction and maintenance. This is subsidised expansion where full cost is not reflected in prices as it is with rail. The playing field is tipped towards road, but it is still high cost for its high share. Other un-allocated road costs to the community not included in price are undue contribution to driver stress and ill-health, road deaths and road congestion.

The huge total cost of the excellent dual inter-state highways between Melbourne, Sydney and Brisbane funded incrementally over many years (in today's dollars) may equal or exceed the cost of constructing High Speed Rail (HSR) and Fast Freight Rail (FFR) to connect the same cities. The total capital cost of new railways and rolling stock may be the same or less than total capital cost of the finished highway plus the equivalent life-time cost of the large number of inter-state road trucks required over 40 years.

The highway is still not finished. Each new section moves the bottleneck down the road. Many truck drivers under pressure for fast transit times take secondary inland roads to avoid the bottlenecks. When the highway is completed they will shift to using it and its traffic will increase significantly.

Can the highway cope with the 4.6% pa or 57% increase in the inter-state freight task in the 10 years 2010 and 2020 projected by BITRE? If the freight task continued to increase on average at say 50% in each decade for the next 40 years, it would grow +500% compound, and more again in later decades, to service the inexorable population increase projected by ABS to be 60% and in major cities 66% over the next 40-50 years. This would add considerably to the growing congestion of the highway and major cities. There would be serious strains even if road freight only increased by say 50% then 25% in each of the next 3 decades or +290% over 40 years. The highway may need expensive extra lanes or even duplication all the way.

Alternatively, the same funds could be put to construction of electric HSR and FFR together side by side. By 2020, advanced, world class, dedicated double track FFR could take 50-60% of inter-state freight along the east coast off the roads. Delivered transit time would be about +20% faster than road and the cost per tonne/km of driver-less, energy efficient freight trains would be lower than road. Relative rail cost would be even less with extra road taxes to make the playing field level and pricing inclusive. FFR would have capacity to meet the increasing freight task for the next 100 years. It is safer so would reduce road deaths. Its co_2 production is far less. It would add considerably to the fuel security of Australia.

Rail would improve productivity and reduce the high cost of the freight transport to industry and consumers. It would increase prosperity and international competitiveness of Australian industry.

Inter-state Rail Transport in Australia

Most railways in Australia were built more than 100 years ago for a population of perhaps 2m. There was large surplus capacity. Now they barely serve 22m with virtually no extra capacity. Many railways need to be totally re-engineered, up-graded or re-built to modern standards for growth in the next 100 years.

America was assessed by 'The Economist' (22.7.10) to have the lowest cost, most efficient rail freight system in the world, though its passenger rail is behind. US rail carries 40% of inter-state freight compared with 24% in Australia. It does this on single tracks shared with scheduled passenger trains. Some $US460b has been invested privately for good returns in US railways since de-regulation in 1980.

To reach the American bench-mark of world best practise in rail freight Australia needs to invest in an advanced system. The key route that needs modernisation is Melbourne, Sydney and Brisbane for both fast general and light freight and high speed passenger rail.

It is envisaged that High Speed Rail (HSR) and Fast Freight Rail (FFR) would be constructed side by side at the same time from Melbourne to Brisbane. Each would be dedicated, specialised, double, standard gauge tracks. The rail bed designed for HSR would enable FFR trains to run faster non-stop. Capital cost of two in tandem would be less than building them separately. Joint maintenance cost would be less, electricity supply cheaper and IT systems more effective. Joint income, mainly freight, would be greater.

FFR would be competitive with road in time and cost. It would gain a large share of the market.

Table 1 Estimates of market shares of road, rail and coastal shipping in the inter-state intermodal freight task, 2009/10 and beyond

Mode	Share (2009/10) %	Share* (Future) %	Share* (Future) %
Road	69	24	24
Rail	24	20	14
FFR*	-	50	50
Sea	6	6	12
Total	100	100	100

Source: BITRE estimates (BITRE Trainline 1, Table 9), 2011. * scenarios

Note: Much of Rail is east/west and most of Road is north/south along the east coast.

FFR trains would have an average speed of 125km/hour or 10km/hour faster than the 115km/hour maximum of present freight rail (average 80km/hour in USA). Transit time from Melbourne to Brisbane would be about 14 hours, plus 5 hours for road delivery, a total of 19 hours or 20% less than road.

FFR trains would be driverless and electric, so labour and energy costs would be less than road. Cost of road freight would be higher and the competitiveness of rail greater with a level playing field.

Capital cost of rail would be about the same as duplicating the inter-state highway from Melbourne to Brisbane plus the extra road trucks to meet the long term growth of freight demand. Net investment would be less than half after deduction value capture from FFR and HSR.

Road and rail freight transit times are shown in the table below.

Table 2 Freight transit times from Melbourne to Brisbane

Mode	Distance M/B terminals Km	Average Speed M/B terminals Km/Hr	Transit times M/B terminals Hours	Local roads Hours	Door to door Hours
Coastal rail	1904	69	27.5	5.0	32.5
Inland rail*	1731	84	20.0	5.0	25.5
FFR **	1718	125	13.7	5.0	18.7
Road ***	1 650	70	-	-	~~23.5~~ 34.0 Realistically

Source: Melbourne-Brisbane Inland Rail Alignment Study, July 2010, Table T32 and Figure F23.
*Inland rail would by-pass Sydney, FFR would not **scenario ***door to door

HSR and FFR entry and exit from major cities would be by covered trenches next to suburban rail which would be rebuilt in separate trenches with greater capacity. Trenches would create large areas of new inner city "land". Low, medium and high density housing, offices, shops and parking would be built over them. This would generate large value capture to finance the rail system. New towns and cities would be built along tracks between major cities which create more value capture by HSR. The aim would be for value capture, largely by HSR, to pay for more than 50% of construction cost of the system. Net investment would be halved, accumulated interest expense reduced and net cash inflow and ROI raised.

HSR passenger trains would travel from Melbourne CBD to Sydney CBD in 3 hours reliably, on time and in comfort. Subsidised HSR commuter trains would serve people living within 30-60 minutes commuting time or 100-300km of capital cities. As regional population along the track would grow faster than the total population, the HSR market would grow rapidly. The new railway system would house many people in inner city areas and lower housing cost regions. It would redistribute the population to the regions. Road and air cannot do this. HSR would compete effectively with both on transit time and cost.

Population growth is virtually unstoppable and congestion increasingly severe. Government cannot fund railways soon enough to redistribute significant numbers of people from cities before they grow much bigger. PPPs with 5 governments for one project would be unmanageable. A private enterprise consortium of major companies like the original VFT could finance, build and operate it earlier.

The rail system would mean a second Sydney airport would not be needed, so government would save $15-20b. Inter-state truck drivers would be re-deployed to delivering to and from enlarged rail terminals. Congestion would be eased, road lives saved and co_2 eliminated when electricity becomes green.

All this is practical and the technology is well known. The rail system would be low cost, profitable and commercially viable, subject to private feasibility study. It could only be built with the cooperation of government. The issue is formation of a consortium to undertake the feasibility study.

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Australian Propensity to Travel

Australians have a high and growing propensity to travel as illustrated by the population of only 22 million supporting the 4th now 5th busiest passenger air route in the world between Sydney and Melbourne. It developed remarkably over the previous 20 years as population and prosperity grew. Most of this travel is domestic. A percentage is Australians en route to and from overseas. Another percentage of the total is overseas visitors.

Passenger projections in the report of The Joint Study on Aviation Capacity in the Sydney Region, 2012, suggest a significant increase in the propensity to travel in the next 40-50 years.

Table 1 Australian Propensity to Travel

	2010	2056	Increase	Growth Rate
Australian Population	22m	36m	64%	1.2%pa
Annual Sydney Region (1) Passenger Movements (2)	40.1m	152m	280%	2.9%pa
Ratio Movements: Population	1.82	4.22	132%	-

Source: ABS; Joint Study on Aviation Capacity in the Sydney Region, 2012, p96.

Notes: (1) Sydney Region: Kingsford Smith Airport, Canberra Airport and Newcastle.
(2) Includes domestic and international passengers (assuming same % in both years)

Passenger movements here are arrivals from and departures to all other airports. They are projected to increase 4.4 times more than the population increase. The ratio of movement to population may increase 132%, indicating that the propensity to travel over the next 40-50 years may more than double (2.32 times). Possibly 2010 was a lower year for travel which would over-state the figures somewhat.

If the propensity to travel as measured (movements/population) remained unchanged at 1.82 for 36m people in 2056, the movements would be 65.5m pa. The additional 86.5m pa making up more than half the projected 152m pa total movements is substantial. It may be explained by growing propensity to travel, which could be feasible as incomes rise and business expands with increasing prosperity. Propensity may be anticipated to continue growing and contribute to maintaining the world air route ranking.

The Sydney Region is only a partial measure or indicator, but as it is the largest centre for air travel in Australia and is on the busiest route, it is instructive. Certainly, the question of the unknown proportion of international passengers slightly blurs the picture. However, their proportion in the total is probably not large enough for the indicative results to be discounted. It is assumed that the proportion is roughly stable over time. If it grows substantially, the increasing propensity may be slowed slightly. If it declines, propensity may increase even more than projected. Better data is desirable.

Higher propensity to travel suggested by these projections is good news for the future of HSR in Australia. It becomes more viable with the greater resilience and security of projected patronage risk that increasing propensity and population give to one of the busiest passenger air routes in the world.

Competitive Analysis: HSR and FFR

The chosen customers for HSR are primarily inter-state, intra-state and commuter passengers in Australia. For FFR they are primarily companies requiring freight transported inter-state. The target markets for HSR are passengers on the eastern sea-board, particularly inter-city. For FFR they are inter-state general and light freight on the east coast between Melbourne, Sydney and Brisbane.

These large markets are for high volume, low cost services. Time and reliability are also factors. Light freight is a small adjunct market for FFR running special trains on HSR tracks in cooperation with HSR. It is a niche market which is time sensitive and cost insensitive.

The competitive transport market is illustrated by the 'Australian Transport Industry Arena Map' attached. The map gives a bird's eye view of the competitive arena on one page. Sectors in bold are dominant and those in brackets are small. Target market areas for The VFT 2 Consortium are marked on the map. They are all based on modern railway technology and new infrastructure.

The dominant competitor in the passenger market is air, i.e. Qantas and Virgin. The dominant competitor for general freight is road. There are several major road companies and many small ones. HSR and FFR would have capacity, time, cost, and reliability competitive advantages over air and road.

There are road and rail transport companies in general freight and rail terminals that would be natural members of The VFT 2 Consortium. There are major construction and development companies outside the arena that would also be natural members of the Consortium. Overseas railway technology companies may also become members. Capabilities of heavy rail owners would also be valuable.

The public is generally for HSR. Government is broadly for HSR and FFR but wary of the large funds required, though this is not necessarily a concern if a commercial approach is taken to net investment. Government favours construction of the lower cost, sub-optimal inland freight railway from Melbourne to Brisbane bypassing Sydney. It would not be competitive in time and maybe cost with road freight.

The VFT 2 Consortium can make a strong case for viable HSR and FFR, subject to private feasibility study. The recent Federal Government's feasibility study of HSR was not a commercial approach. It avoided airports and did not contemplate the general freight market, only the small, light freight business.

There is a clear case that the Australian national interest supports the HSR and FFR project. Population increase would be decentralised, congestion contained and liveability sustained, if it is built before the population grows too much. Industries' freight costs would be reduced with a +50% FFR share of market and international competitiveness materially increased. Government should support these large, significant and compelling improvements in the national interest. Governments could build the railways to manage population increase and privatise them later, or support private enterprise in building them.

There are three groups that would be strongly opposed to HSR and FFR: the airlines, the oil companies and the unions. The airlines could find 70-80% of their inter-state passengers on the east coast switching to rail. The airlines cannot compete with high volume commuter and short regional rail services on the route. They can join the Consortium and manage more passengers. They should not lose and may improve profitability. As the population increases, prosperity rises and more people live in the regions, more will want to reach airports by rail to travel to other parts of Australia and overseas by air.

HSR would compete with airlines on service, cost and time. HSR labour costs would be less with fewer and lower skilled, more abundant lower paid staff. Airlines could retain their staff and shift them to growing international markets. Rail maintenance costs would be less than overseas HSR as fewer trains per day would run and cause less wear. HSR maintenance costs would be less than high tech air planes.

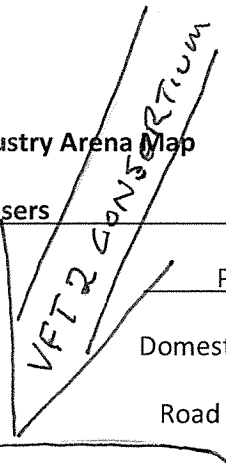
The oil companies would lose considerable sales of fuel for road trucks and airplanes. It would be in their interest to maintain road and air usage. This would be up against environmental interests and would make for growing demand for imports of high cost fuels compared with the smaller energy demand for lower cost, domestically produced increasingly green electricity by HSR and FFR.

The unions would be against loss of inter-state truck drivers' jobs and fewer skilled domestic airline jobs. Many truck drivers would shift from inter-state work to delivering city freight by road to and from rail terminals much enlarged to handle the increased rail freight. Airline staff would move to international services. Transport Unions are strong and well represented in Parliament.

Those against HSR and FFR are powerful and influential, but could not overturn the strong national interest for HSR and FFR. They would have the 10 years during railway construction to adapt.

Competitive HSR and FFR will bring about major transformations to the benefit of Australia and its continued prosperity and liveability.

Australian Transport Industry Arena Map



Suppliers	**Users**				
	Companies- freight			Passengers	
	Heavy	General	Light	Domestic	International
Traded transport		**Road**	Road	Road	
"	**Rail**	Rail	(Rail)	Rail*	
"		(Air)	**Air**	**Air**	**Air**
"	**Sea****	(Sea)		(Sea)	(Sea)
Own use transport***		Road			
"	Rail				
Infrastructure	Ports	Terminals		Stations	Airports
Services	Shipping agents		Freight forwarders	Travel agents	
"	Rail track leases		Warehouses	Fuel supplies	
Equipment	Rail tracks	Rolling stock	Trucks/vans	Ships	Planes

Main Players: Rail: Asciano, Aurizon (Heavy/own use: BHP, Rio, Fortescue) Fed/State Gov'ts

Terminals: Asciano, Fed. Gov't. Stations: State Gov'ts.

Rail track leases: ARTC

Road: Toll, Linfox, Australia Post, DHL, Fedex. Fed/State Gov'ts

Air: Qantas, Virgin, (International Airlines).

Airports: Fed/State Gov'ts

Sea: (International Shipping Cos.)

Sea ports: Asciano, Cube, Citi. (Own use: BHP, Rio, Fortescue)

Equipment: Downer EDI, Ford, GM, (Overseas Rail Cos.) Services: oil companies

Unions: Transport- road, rail, sea, air.

Notes: *Largely suburban, some intra-state, little inter-state. ** Mainly international. ***Non-traded transport of other industries.

Competitive Positions of Road, Rail and Air

A perspective of the potential competitive positions of Fast Freight Rail (FFR) and road, and of High Speed Rail (HSR) and air costs and prices, projected forward to when the railways are constructed and in operation along the east coast, are estimated below in nominal, pro-forma figures. These preliminary, indicative numbers need further analysis and confirmation by private feasibility study of HSR and FFR.

Table 1 East Coast Inter-state General Freight Market Competitive Position

	Road (1)	FFR (2)
	%	%
Fuel/energy	29	5
Labour	32	5
Other, including maintenance	22	14
Total operating costs	83	24
Ebitda	17	26
Revenue	100	50
FFR price decrease	-	50
Comparative road price	100	100

Source: 1 Trans-eco; 2 VFT2 Project estimates

Table 2 East Coast Inter-state Passenger Market Competitive Position

	Air (1)	HSR (2)
	%	%
Fuel/energy	26	5
Labour	23	18
Other, including maintenance	26	32
Total operating costs	75	55
Ebitda	25	40
Revenue	100	95
HSR price decrease	-	5
Comparative air price	100	100

Source: 1 Qantas Annual Report; 2 VFT 2 Project estimates

Notes:

1 Total dollar revenue for road/FFR in Table 1 is around double air/HSR in Table2. Road and air dominate their market, with up to 95% shares. Existing east coast rail is old, slow and not competitive.

2 Electric trains use less energy per tonne/km and per passenger/km than road and air respectively.

3 Labour cost for FFR driverless trains plus truck delivery at each end are much less than road. Labour cost of HSR for a smaller, less skilled workforce is less than air. Labour costs for road are more than air.

4 'Other, inc. maintenance' costs for road and FFR are low as a percentage of the higher dollar revenue than air and HSR. Maintenance costs for air and HSR are higher as a percentage of smaller revenue than road and FFR. In dollar terms, maintenance costs of both industries tend towards each other.

5 Depreciation and amortisation are written off annually over around 10 years for trucks, 20 years for aircraft and 40 years for railways. More trucks and aircraft are needed for the same task as rail. The equivalent lifetime investment in trucks and aircraft to rail over 40 years is high, so annual depreciation and amortisation charges of road and air are closer to those of rail, though may be less.

The capital cost of building rail is cut more than in half by property value capture and so net investment, and therefore depreciation and amortisation and accumulative interest expense during construction, is much less than otherwise for HSR and FFR, thereby adding significantly to their competitiveness.

6 Ebit on FFR is likely to be higher than road on the large revenue even after allowing for somewhat higher depreciation in Ebitda, as its costs are much lower. Similarly, Ebit on HSR is likely to be higher than air (which has been adjusted up from the airline's present reported Ebitda of about 20% for recovery to a commercial profit margin on sales, giving it an Ebitda of 25% at some point during the 10 years of HSR construction). In dollars, Ebitda of 17% on road is much larger than the 25% on air. FFR Ebitda in dollars may be more than HSR, though Ebitda in percentage is smaller for FFR on its larger revenue, as total FFR depreciation in dollars may be a rather less than HSR when the joint part of the net investment in the two railways is shared, but the separate part of HSR is more than FFR. Ebit in dollars for FFR is bigger than HSR.

7 Prices charged for rail freight may be half of road, which together with much faster inter-state rail delivery would gain a large share of the east coast freight market for FFR. Prices charged by HSR may be slightly lower overall than air in the long term, which together with equal or better service, reliability and the convenience of alighting right in the CBD would gain a large share of the east coast passenger market for HSR.

8 The combined Ebitdas of the HSR and FFR railways are greater than those of road and air. Combined Ebit, allowing for higher depreciation, is probably greater too, so The VFT 2 Consortium which would build both railways side by side at the same time should be highly profitable in net profit and ROI terms.

9 Australia would benefit from lower freight and passenger costs. International competitiveness of industry would increase substantially. Congestion would be reduced with more people living in the regions between the major cities and many of them commuting by HSR who cannot by road or air.

10 This perspective is subject to the private feasibility study and government cooperation.

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HSR/FFR Risk Management

There are four main areas of risk in the joint construction of High Speed Rail (HSR) and Fast Freight Rail (FFR) along the east coast of Australia for a private enterprise Consortium. These are budget cost and time overrun; projected passenger and freight patronage reality; value capture on property; and finance and tax. There are others of course that may develop greater significance, such as safety, environment, union action, geology and economic variables (interest rates, exchange rates and inflation).

With recognition of risks, careful planning, constant watchfulness for change and appropriate response to developments, risk can be managed and minimised by competent, professional people during feasibility study, construction and operation.

It is assumed that voters will not become disenchanted with population increase and the lack of infrastructure to the point where migration is forced to all but cease and HSR not be needed for decentralisation. It is also assumed that people will not simply accept the high degree of congestion and the consequent decline in liveability that continued population increase would bring without HSR. There appears to be a low probability of either of these two extreme scenarios arising.

The risk of budget and time overruns is high on such a large project. A private consortium has better prospects of setting and meeting tight deadlines than government. Shorter construction times reduce accumulated interest expense. The extra cost of missed budgets and accumulated interest expense on longer government projects tend to more than offset the cost advantage of cheaper government debt. The Consortium would appoint the best project manager in the world. Full commitment of government and its instruments at all levels would be necessary to private completion on target. Governments have incentive to commit as they would be conscious that failure of a private project would have to be taken over by government at great cost and privatised again later. Necessary too is that government shall not accept negative views of those who may be against the HSR/FFR project.

The patronage risk of not achieving projected passenger numbers and freight tonnage in operation is a key issue. The projections on which the feasibility study would be based need to be prudent. The projections rest in part on the share of the markets that competitiveness of modelled economics and offerings of private HSR and FFR businesses would actually gain in practice. FFR would be extremely competitive with freight price and delivery time halved. HSR would be competitive with passenger cost reduced, better service and market growth with high propensity to travel. Large shares of their markets and patronage would be gained. Together they would be highly competitive and profitable.

The risk associated with capturing the large property value created by private HSR and FFR depends primarily on the adoption of policies to encourage decentralisation along the east coast by governments and on price assumptions. Support is likely, more than in other countries building such railways, since it is a significant resolution to the issues of city congestion and liveability as the Australia population increases twice as fast as the world average, and high road freight costs grow more rapidly.

The risk to finance of the project hinges on the other main risks, government subsidy of commuters and on tax. Commuter subsides are major policies encouraging large scale decentralisation of population. If Federal capital gains tax were applied to value capture, including regional property, the private project would not go ahead as it would become un-bankable and unattractive to foreign investment.

The risks are real, but can be managed. There would be a substantial contingency allowance for unexpected effects of assessed risks, which with skill and dedication may not be needed in full.

Infrastructure Guarantees

Introduction

The proposal that the Federal Government guarantee private loans for infrastructure, as with previous bank guarantees, has merit and potentially profound implications.

Australia has been estimated to have the second wealthiest people in the world after Switzerland. The inability of Australian Governments to fund construction of infrastructure in these circumstances is a sign that there are serious problems in government financial arrangements. It is like a family who spends up, but cannot afford to fix the roof or add a room for the new baby.

The scale of the problem is significant. Australia is thought to have a back-log in spending on infrastructure of up to some $800 billion, plus the need to provide additional future funds for one of the fastest growing populations in the world. Other signs are sale of government infrastructure assets and growth of PPPs and tolls, adopted to reduce the usual government infrastructure funding obligations. Government funds and borrowings that could have been allocated to infrastructure have been spent largely on more regulations and entitlements. These decisions to spend have contributed to smaller structural budget surpluses in booms and larger structural budget deficits in recessions. They have been less than prudent and have led to accumulation of the back-log.

Issues facing Australia are: government financial arrangements, government regulations, industrial relations and Federal/State relations; areas not productive enough, but can be made more productive.

Success of the surge in prosperity in recent decades contains the seeds of its destruction. They may grow and constrain productivity more unless remedied. Government finances have shifted the balance in the economy away from incentive towards entitlement, in the process going as far as absorbing funds for infrastructure and the future. Since the War, regulation has grown to unsustainable proportions and costs. Industrial relations, during unprecedented prosperity, have retreated to pre-prosperity aggressiveness. Can more unionists lift prosperity further or just gain a larger share of a smaller cake? Federal/State relations appear to have descended essentially to competitive entitlement distribution. Each of these is a drag on productivity, real growth, prosperity and liveability for everyone. Together they are a serious impediment.

General application

There may be considerable disruption during the period of adjustment while rectifying these issues. Guaranteeing loans would stimulate economic activity that would alleviate much of the disruption. It would act as a safety net for employment. It may boost the economy, especially in the Eastern States, more than the mining boom, upwards of perhaps $1,000 billion on infrastructure investment in a few years, funded largely through loan guarantees and partly government expenditure. It would not increase exports directly as with mining, but it would increase productivity and international competitiveness which, together with rapid population increase, in due course may lead indirectly to more ongoing growth of exports in the long term than mining.

Government guarantees would reduce the risk and increase the safety of loans for investors in private debt. They would attract overseas investors and Australian Superfund investors. Access to finance at lower government interest rates commensurate with lower financial risk during a window of high exchange rates and low market interest rates would increase private infrastructure provision.

Guarantees and private construction would create many more jobs and the conditions for more workforce participation generally and also more female workforce participation, which would stimulate the economy further. This would increase productivity while removing infrastructure bottle-necks.

Advantages

More rapid growth of the non-mining sector would increase incomes and consequently raise taxation revenue. This would contribute to offsetting the effects of the decline in the terms of trade on tax as the mining boom eases. This occurs where prices fall on part of GDP that is exported while prices rise for the rest of GDP leading to a negative gap between nominal GDP and real GDP, which makes for lower profits and taxation receipts. The result of infrastructure investment would be higher nominal GDP than otherwise and more revenue available for government infrastructure and other spending requirements.

Private loan guarantees have other advantages for the Government. They have no cash cost or demands on the budget. They are off balance sheet contingent liabilities that are unlikely to be realised. They stimulate the economy without taking funds needed for other Government spending, indeed they increase Government revenue. There are no apparent costs, only benefits. There are, however, risks.

Risks

There is the risk of over-stimulating the economy with too high a dollar quantity of guarantees. It is a matter of management by the Government. There is the risk of guaranteeing some poor quality projects with inadequate feasibility studies or prospects of returns that are too low. The larger the total of guarantees, the greater is the risk of including a bad project. It is a matter of management. There is risk of higher industrial relations action with guaranteed "Government project" construction. This also is a matter of management.

Federal and State Government coordination, cooperation and focus in a timely manner are vital for effective guarantee policy. These are needed for planning/approval processes and reducing regulation of guaranteed infrastructure projects to shorten their lead-times. They are needed to facilitate project implementation and infrastructure operation without loss of quality and performance. Government has incentive to act supportively in order to avoid project failure and consequent guarantee pay-out. Private business management reduces risk of time and budget over-run.

There may be a risk to the community in privately operated "government infrastructure" where a monopoly is conferred that might elicit monopolistic practices beyond the normal private return on equity employed. This is a matter not of close regulation, but of creating expectations of moderate, responsible behaviour in a privileged position granted in a growth economy and of holding in reserve government powers to correct it, if need be.

With good management there should be few instances of failure where the Federal Government would be called on to fund its guarantee. These in the total of many separate projects should be small. The net cost also should be small. Eventually, it disappears altogether as projects return to government direct funding.

Benefits

The benefits of guarantees would be far greater than the costs and be very large for the Federal Government, the States, the economy and the population as a whole. They include greater reason for retention of Australia's AAA rating.

The initial boost to the economy would provide the opportunity for action on the necessary transformation of the issues and would offset temporary disruption, particularly for employment. The results of bringing in guarantees and adjustments hand in hand would be exceedingly beneficial.

Failure to take the opportunity for issue resolution during the infrastructure guarantee boost to the economy would make it more difficult, even unlikely to happen afterwards.

Removing the infrastructure bottle-necks and building for growth, together with rectifying the issues, would increase productivity significantly and guarantee ongoing, long term prosperity and liveability for the growing population.

Assumptions

There is an implicit assumption so far that there will be no Federal Government bank guarantees at the same time as infrastructure guarantees. If both were in place on a large scale, a situation may develop where sovereign debt risk might arise, meaning a possibility of default on government debt.

Bank guarantees are rare and relate to a temporarily dangerous situation that occurs infrequently. Infrastructure guarantees are longer term measures to increase infrastructure investment and stimulate the economy.

The risk of infrastructure guarantee exercise of 100% is low over a long period. The risk of bank guarantee exercise of 100% is high over a short period. The combined risk for a brief time is not much higher and should not affect sovereign debt.

During the GFC bank guarantees were introduced in Australia. Shortly afterwards substantial capital inflow occurred while the bank guarantees were still in effect. They contributed to maintaining the high exchange rates. Risk then declined and guarantees were removed. The Australian sovereign debt risk was low throughout. It would be unlikely to have been affected by large infrastructure guarantees.

The underlying assumption here is that government finances and the financial system remain well managed, so sovereign risk is always kept low, even with bank guarantees. This is highly probable in future given the experience gained during the GFC. It will reinforce avoidance of major problems.

It should be acceptable now to enter a large volume of on-going infrastructure guarantees without concern for a new round of bank guarantees or raising Australian sovereign risk. To discard, defer or drastically limit infrastructure guarantees for these considerations may be unduly cautious.

Anti-cyclical application

GDP is usually regarded as the aggregate value of decisions to spend. Fiscal and monetary policies are based on forecasts of aggregate decisions to spend relative to full potential output of the economy. Booms are characterised by exuberant decisions to spend and recessions by tentative or withdrawn decisions to spend. These decisions are made by the many in the economy. In booms, risk of losing money or job diminishes and in recessions heightens. Returns usually match risks. Changes in mutually perceived forecasts of risk and return reinforce new directions of decisions to spend by the many.

Central governments have the power and means, the role and duty to make single decisions to spend that are contra-cyclical to extremes in decisions by the many, without the same regard for risk. The intention is to rein in the pleasure and mitigate the pain. The less determination applied to tempering pleasure, the greater is the pain later and the more difficult to recover full potential GDP.

When a federal government makes it known that large scale infrastructure guarantees are available, they come into effect as soon as private companies commit to spending on construction of known government guaranteed projects. The government is assured of a certain, direct, specific, measureable increase in spending on investment in the economy. Once introduced and accepted, a reduction in infrastructure guarantees from the previous level also has a certain, direct, specific, measureable lowering of spending. When it is known that availability of guarantees is reduced, private infrastructure spending for government is deferred until new ones become available again.

Government funded infrastructure spending is under its control and can be increased or decreased in concert with guarantees for private construction. Guarantees can magnify the effect of government funding. Availability of government funds for infrastructure and of infrastructure guarantees encourages "shovel readiness" and short lead times to spending. If government funds are not readily available, more guarantees may be needed temporarily.

Infrastructure guarantees can be regarded as an alternative to or complementary to quantitative easing in fiscal policy. Both can stimulate or restrain spending in the economy during business cycles. If employed in tandem, less quantitative easing may be needed and less risk of miss-forecasting its effect.

Quantitative easing

Quantitative easing is introduced in recession by governments to increase bank liquidity and reduce interest rates in the expectation that spending decisions in the economy will be raised later through more bank lending. Government funds given direct to consumers is a form of quantitative easing. There is an indirect, unknown, uncertain, un-measureable, general effect that may shortly result in increased decisions to spend or they may lag for an indefinite period.

Quantitative easing encourages banks to increase decisions to spend/lend, which influence companies' decisions to spend, which in turn motivates peoples' decisions to spend. There are three series of decisions to spend. Confidence in booms may be quickly lost, but takes a longer time to re-establish.

It is uncertain when to reduce quantitative easing as the economy picks up. If it is unwound inappropriately, it may force up interest rates and slow the recovery or even collapse confidence. If it is not wound down and is allowed to continue inappropriately, it may over-stimulate the economy and lead to substantial inflation. The cause is clear, but effect in amount and timing is indeterminate.

Secondary effects

Both large scale infrastructure guarantees and quantitative easing are new and experimental. An increase in each reduces interest rates, quantitative easing generally and infrastructure guarantees specifically for infrastructure projects. Quantitative easing may lead to capital outflow seeking higher interest rates overseas. Infrastructure guarantees may lead to capital inflow seeking greater security at lower interest rates. Both may affect the exchange rate, but in opposite directions: quantitative easing tends to lower it and infrastructure guarantees tend to raise it, with opposite impacts on exports and imports. Excessive quantitative easing may devolve into competitive devaluation with increased risk of the undesirable consequences of deeper recession.

Comparative effects

Infrastructure guarantees appear less risky in application than quantitative easing. They are more certain in effect. They are more controllable. They take effect more quickly. It may be that the scale of infrastructure guarantees needed is smaller than quantitative easing for the same effect.

In other words, the amplitude of quantitative easing may tend to be larger over the cycle or more than compensate, since it is slower to take effect and the impact is less certain until results finally can be seen. Infrastructure completion can be measured. It can indicate whether the rate of guarantee issue should be wound down to moderate stimulation or wound up to accelerate the effect.

Infrastructure guarantees can be prioritised according to cost/benefit of the spending. They can be targeted to specific geographic areas and employment requirements. Spending is in part at low Government risk which is not in question. Quantitative easing supports banks and influences the amount of finance available for bank lending generally, which is essentially on demand and unpredictable spending at the lenders' and spenders' risk at a time when they are more sensitive to risk.

A situation may be envisaged where infrastructure is up to date and few new projects remain to be guaranteed in a recession. Infrastructure for the future could be brought forward. Old infrastructure could be reviewed and replaced before its time by more effective facilities, particularly in advanced counties with declining populations. Quantitative easing is more broadly applicable in the economy.

Short and long term application

In Australia at present, there is a role for large scale, long term structural expansion of infrastructure guarantees to repair infrastructure and to clear the back-log, especially along the east coast. As a result, stimulation of the economy may be so large that opposing quantitative tightening or other means may be required temporarily to off-set its effects or the rate of issue of guarantee may have to be slowed. The effect of remedying the issues would dampen the tendency to over-stimulate and lessen the need for other measures to off-set.

Large amounts of infrastructure guarantees are not a substitute for permanent lack of government infrastructure funds that are spent on other things. Their scale may leave little room for contra-cyclical policy and in these circumstances significant short term changes may fall too heavily on one industry, construction.

The budget needs to be returned to structural balance over the business cycle. Once the back-log has been eliminated, a steady, lower ongoing rate of infrastructure funding each year may be expected. Then either extra infrastructure guarantees or quantitative easing could be employed contra-cyclically with or without the other, in conjunction with further policy measures available.

Summary

Infrastructure guarantees and quantitative easing appear to be powerful additional fiscal policy levers for governments. In the long term, they may be used judiciously to assist in moderating the amplitude and worst effects of swings in the business cycle, within the prudent parameters of structural balance over the cycle. In the shorter term, they may be used to assist in removing the infrastructure back-log and off-setting strains of adjustment through stimulating the economy during rectification of major issues facing Australia.

Infrastructure Guarantees 2

Booms are characterised by exuberant decisions to spend and recessions by tentative or withdrawal of decisions to spend. These decisions are made by the many in the economy. In booms, the risk of losing money or job diminishes and in recessions it heightens. Returns match the risks. Changes in mutually perceived forecasts of risk and return reinforce decisions to spend by the many.

Central governments have the power and means, role and duty to make single decisions to spend that are contra-cyclical to extremes in decisions by the many, without the same regard for risk. The intention is to rein in the pleasure and mitigate the pain. The less determination applied to temper pleasure, the greater is the pain later and the more difficult to recover a fully productive economy.

Infrastructure guarantees can be regarded as an alternative to or complementary to quantitative easing in fiscal policy. Both can stimulate or restrain spending in the economy during business cycles. If employed in tandem, less quantitative easing in total may be needed.

When a federal government makes it known that large scale infrastructure guarantees are available, they come into effect as soon as private companies commit to spending on construction of known, government guaranteed projects. The government is assured of a certain, direct, specific, measureable increase in spending on investment in the economy. Once introduced and accepted, a reduction in infrastructure guarantees from the previous level also has a certain, direct, specific, measureable lowering of spending. When it is known that availability of guarantees is reduced, private infrastructure spending for government is deferred until new ones become available again.

Government funded infrastructure spending is under its control and can be increased or decreased in concert with guarantees for private construction. Guarantees can magnify the effect of government funding. Availability of government funds for infrastructure and of infrastructure guarantees encourages "shovel readiness" and short lead times to spending. If government funds are not readily available, more guarantees may be needed temporarily.

Quantitative easing is introduced in recession by governments to increase bank liquidity and reduce interest rates in the expectation that spending decisions in the economy will be raised later through more bank lending. There is an indirect, unknown, uncertain, un-measureable, general effect that may shortly result in increased decisions to spend or they may lag for an indefinite period.

Quantitative easing encourages banks to increase decisions to "spend", which influence companies' decisions to spend, which in turn motivates peoples' decisions to spend. There are three levels of decisions to spend. Confidence in booms may be quickly lost, but takes a longer time to re-establish.

It is uncertain when to reduce quantitative easing as the economy picks up. If it is unwound inappropriately, it may force up interest rates and slow the recovery or even collapse confidence. If it is not wound down and is allowed to continue inappropriately, it may over-stimulate the economy and lead to substantial inflation. The cause is clear, but effect in amount and timing is indeterminate.

Both large scale infrastructure guarantees and quantitative easing are new and experimental. An increase in each reduces interest rates, quantitative easing generally and infrastructure guarantees specifically for infrastructure projects. Quantitative easing may lead to capital outflow seeking higher interest rates overseas. Infrastructure guarantees may lead to capital inflow seeking greater security at lower interest rates. Both affect the exchange rate, but in opposite directions: quantitative easing tends to lower it and infrastructure guarantees tend to raise it, with opposite impacts on exports and imports. Excessive quantitative easing may devolve into competitive devaluation with undesirable consequences of deeper recession.

Infrastructure guarantees appear less risky in application than quantitative easing. They are more certain in effect. They are more controllable. They take effect more quickly. It may be that the scale of infrastructure guarantees needed is smaller than quantitative easing for the same effect. In other words, the amplitude of quantitative easing may tend to be larger over the cycle or more than compensate, since it is slower to take effect and is less certain until results finally can be seen. Infrastructure completion can be measured. It can indicate whether the rate of guarantee issue should be wound down to moderate stimulation or wound up to accelerate the effect.

Infrastructure guarantees can be prioritised according to cost/benefit of the spending. They can be targeted to specific geographic areas and employment requirements. Quantitative easing supports banks and influences the amount of finance available for bank lending, which is essentially on demand and unpredictable spending at the lenders' and spenders' risk.

A situation may be envisaged where infrastructure is up to date and few new projects remain to be guaranteed in a recession. Infrastructure for the future could be brought forward. Old infrastructure may be reviewed and replaced before its time by more effective facilities, particularly in advanced countries with declining populations.

In Australia at present, there is a role for large scale, long term structural expansion of infrastructure guarantees to repair infrastructure and to clear the back-log, especially along the east coast. As a result, stimulation of the economy may be so large that opposing quantitative tightening or other means may be required temporarily to off-set its effects or the rate of issue of guarantee may have to be slowed. Infrastructure guarantees are not a substitute for permanent lack of government infrastructure funds that are spent on other things. The budget needs to be returned to structural balance over the business cycle. Once the back-log has been eliminated, a steady, lower ongoing rate of guarantees each year may be expected. Either extra infrastructure guarantees or quantitative easing could be employed contra-cyclically with or without the other in conjunction with usual measures.

Infrastructure guarantees and quantitative easing appear to be powerful fiscal policy levers for governments. In the long term, they may be used judiciously to assist in moderating the amplitude and worst effects of swings in the business cycle, within the prudent parameters of structural balance over the cycle. In the shorter term, they may be used to assist in removing the infrastructure back-log and off-setting strains of adjustment during rectification of major issues facing Australia.

Government Guarantees, Debt Limits and RBA Reserves

Governments implicitly guarantee their debt against default which is a quantifiable contingent liability. Governments stand behind their central banks and implicitly guarantee against default the lender of last resort to banks should they be in danger of default or actually default. This is an unquantifiable contingent liability. Some governments explicitly guarantee bank deposits which are quantifiable contingent liabilities.

Central Bank balance sheets in USA and Japan have increased remarkably in recent times as they engage in quantitative easing. These funds have largely accumulated unspent on balance sheets of banks. This is a quantifiable implicit government contingent liability. How is this situation regarded by credit rating agencies? Is it ignored or should ratings be reduced?

The Australian Government rating is AAA. Australian debt as a percentage of GDP is low in international comparison. The RBA has a relatively small balance sheet and has not undertaken any QE. Australian Banks are amongst the few in the world with AAA ratings. The implicit and explicit Australian Government guarantees and contingent liability are regarded as small, as is the risk.

If the Australian Government issued explicit, quantifiable Commonwealth guarantees for private infrastructure loans on a large scale, say $100b or more, it would be a relatively modest increase in the total contingent liability, quantifiable and unquantifiable. It would be spent on large, defined productive projects, for example the private VFT 2 Project, which is profitable subject to feasibility study, and not sit on bank balance sheets virtually unused. It would add to confidence and strongly stimulate non-mining economic growth without imposing on the budget directly. As a result, larger budget surpluses could be run, internal economic distortions corrected, foreign investment employed productively in job creating projects on the east coast, transport costs reduced, international competitiveness increased, Government debt repaid and structural budget balance restored earlier.

The infrastructure backlog could be overcome and then adequate infrastructure spending could return to being funded annually within the budget without further guarantees as is normal. Government guarantees should only be used for special situations. They should be unwound in better times just as deficits should be turned to surplus and debt repaid. They can be an adjunct to usual fiscal policy. There should be annual figures publically available that clearly show whether the country is living within its mean or not, and where it stands in terms of structural budget balance.

In the present circumstances, the Australian AAA rating would be bolstered by growth generated by guarantees or at least the enlarged contingent liability would be offset in rating reviews. Rating agencies could hardly penalise a stronger Australia compared with other countries in far weaker positions.

No doubt Mr. Joe Hockey was asked by US rating agencies in his recent discussions with them in New York to increase the Australian Government debt limit and add to the RBA reserves. This probably was intended to send a message about agencies' requirements to other Governments in weaker positions that are contemplating private loan guarantees. Also arrangements should be put in place before they are needed rather than add to uncetainty in a crisis. These moves may have made the agencies more comfortable with large Australian Government guarantees of private infrastructure loans, especially in the looming period when international financial stability may be tested again.

Practical Application of Government Guarantees

High Speed Rail (HSR) and Fast Freight Rail (FFR) built together side by side would resolve much of the population increase, productivity and international competitive problems of Australia. Government guarantee of private infrastructure loans would give incentive to a Consortium to build the railways.

It is understandable that the Federal Government may not want to grant guarantees for the life of the project, in the case of these railways about 40 years.

Super Funds want to invest in long term infrastructure projects for up to 40 years, once they have been operating for three years, but not before, to reduce their risk.

The previous Federal Government contemplated building HSR over 35 years in disregard of the devastating effect of cumulative interest expense on project results and government finances.

If Government alone were to build HSR and FFR in a reasonable time frame, it would bear the risk of being unable to bring a project of this magnitude anywhere close to completion on budget and on time. The high cost of over-runs could swamp the advantage of a lower interest rate.

If the Federal Government could raise the funds, which is unlikely, the interest rate would be about 2% less than commercial rates for a private Consortium. Higher rates would render unattractive what is essentially a 'government' project to a Consortium. There would be no railways, unless the private project was on the same footing as a government project and earned a competitive return on investment.

Given present Federal/State relations, five Governments (Federal, three States and the ACT) operating five PPPs with five different private contractors would be unworkable. Five separate Governments in a PPP with one private contractor would also be unworkable. Five Governments in close cooperation with a private Consortium, like the original VFT Consortium, would be workable.

All these factors could be resolved by Government guaranteeing private infrastructure loans during construction, a period of around 10-11 years, and three years of operation, for a private enterprise Consortium to build HSR and FFR rapidly without loss of quality, on budget and on time, with the cooperation of government. After three years of satisfactory operation, Super Funds would refinance the ongoing business without Government guarantees, but at a higher rate of interest. After three years of operation or so the Consortium would float the business on the share market in an IPO.

It may be expected that the Federal Government, in order to approve the guarantees, would assess the people heading the Consortium and determine provision of the most effective government cooperation at all levels necessary for success of the project. During the period of the guarantees the Government may be expected to audit the implementation of construction and operation of the project.

Government guarantees would enable the Federal Government to have the railways built privately without employing large amounts of Government funds on infrastructure by raising Government debt. It would permit more Government budget funds to be applied to other priorities, rather than using them to build HSR and FFR. The economy would be stimulated leading to increased tax revenue, thereby contributing to earlier budget surpluses and reduced debt.

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