CIPFA

PUBLIC FINANCE

Diploma stage examination

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MARKING SCHEME

AT THE HEART OF YOUR CAREER

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Question 1

(a) Financial cost

For long-term borrowing this would be the payment of interest and the repayment of the principal.

For PFI it would be the payment of an annual unitary charge, made up of the capital and revenue costs of the scheme payable once the scheme was operational and potentially linked to quantitative and qualitative performance targets. As PFI schemes only proceed if superior value for money (vfm) is demonstrable one can mark its financial cost as superior if this option was chosen. *3*

Flexible Use

Few constraints exist on the use of borrowed funds; the only constraints being any uses, which borrowers feel generate inappropriate risk and lead to funds not being forthcoming at an acceptable rate of interest.
Since PFI can only proceed if it demonstrates superior vfm usage is slightly more constrained than is the case for long-term borrowing. *3*

Flexible Availability

Generally long-term borrowing and PFI score well against this. No major constraints exist on the amount of funds that can be raised via either route. *2*

Administrative Complexity

The high costs of negotiation and management of PFI, significantly outweigh the administrative costs of raising long-term finance, especially as PFI requires a complex competitive tendering process. *2*

Political Attractiveness

This is somewhat subjective and will depend in part on the political views of stakeholders. PFI could score well as a result of superior vfm at the contract stage but well publicised problems in the management of PFI projects could undermine this. *2*

Wider use of funding mechanism

PFI scores more highly here since aspects of it eg. linking of unitary charge payments to performance targets and the fact that private sector capital is at risk enables it to provide incentives for vfm while no such incentives exist with long-term borrowing. *2*

Certainty of Amount

No real uncertainty exists as to the amount received from long-term borrowing, nor the cost of acquiring it (unless it's a flexible rate loan): PFI is slightly less certain largely because of well-publicised problems concerning the renegotiation of contract variations. *3*

This section to be marked on basis of 1/2 mark for identification of each appropriate criterion; 1 mark per point appropriately relating criteria to the two funding sources and evaluating their performance against each criterion to maximum of 17. Above mark allocations are consequently indicative.

(17)

(b) **(i)** Risk of passenger numbers and hence revenue being less than forecast.
Risk of tramway maintenance costs being higher than forecast.
Risk of running costs such as tramway staff costs escalating above forecast levels.

1 mark per appropriate risk up to a maximum of 3

(ii) Identification of the risks involved in the project.
An assessment of their impact.
An assessment of the likelihood of their arising.
Calculation of their expected financial impact (i.e. multiplying estimated financial cost of the risk by probability of its occurrence).
Sensitivity analysis i.e. systematic variation of assumptions upon which project forecasts are based.
Categorisation of risks and their allocation across different PFI partners.
Development of policies to manage and mitigate risks.

1 mark per appropriate stage up to a maximum of 7

(10)

(c) Need for effective ongoing evaluation to ensure continued delivery of vfm.
Sufficient focus in staff training on ongoing management.
Avoidance of excessive charges for contract variations.
Maintenance of continuity between staff responsible for negotiating and managing contract.
Training of staff recruited from private sector in proper conduct of public sector activity.

1 mark per appropriate point up to a maximum of (5)

(d) **(i)** The official value of a bond – usually £100: this may differ from the bond's purchase value in certain circumstances. *2*

(ii) Rate of interest paid by a bond, expressed as a percentage of its par value. *1*

(iii) Length of time before an existing bond is due to be redeemed. *1*

(iv) Interest rate on bond expressed as percentage of its purchase price, adjusted by any capital loss/gain to be made at redemption, caused by purchase price differing from par value. *2*

(6)

(e) The running yield of a bond is the annual interest paid by a bond divided by its purchase price.
This equals 5/98.5 = 5.076% *(2)*

(40)

Question 2

(a) **(i)** The government borrows from the money markets when the Debt Management Office (DMO) issues treasury bills to banks and other financial institutions. Such bills always have a life of less than one year.

Government borrowing from the capital markets refers to borrowing of more than one year's duration, which is carried out via the issue of bonds by the DMO to financial institutions. *3*

(ii) Government borrowing from the money markets increases the liquidity of the banking system, thus increasing banks' willingness to lend money, which in turn increases the money supply. Economists believe that this will tend to lead to inflation that will:

- other things being equal, damage international competitiveness
- disadvantage those on fixed incomes such as pensioners
- discourage investment if inflation becomes high and volatile. *5*

Significant issues of government bonds will need to be made more attractive via an increased return that will lead to increased interest rates in the economy generally. This will tend to reduce economic activity as it will:

- reduce consumption and investment expenditure that is financed by (now more expensive) credit
- reduce the disposable income (and hence expenditure) of those with significant amounts of variable rate debt
- lead to an appreciation of the exchange rate reducing UK international competitiveness; this occurs as higher domestic interest rates increase the demand for the domestic currency. *5*

(13)

(b) The concepts of direct and indirect taxes are based in part upon two other concepts:

- The formal incidence of a tax i.e. who is formally responsible for payment of the tax.
- The effective incidence of a tax i.e. who actually bears the cost of a tax.

A direct tax is one whose formal and effective incidence is designed to be the same.

An indirect tax is one whose formal and effective incidence is designed to fall upon different people.

In reality the frequency with which the incidence of a tax is passed from one taxpayer to another means that the concepts become a little blurred but generally UK income tax is seen as a direct tax and UK value added tax an indirect tax. *(5)*

(c) Price elasticity of demand is a measure of a product's responsiveness of demand to a change in its price, all other things assumed to remain constant. It is measured by means of the formula –

$$\frac{\text{Percentage change in quantity demanded}}{\text{Percentage change in price}}$$ *(3)*

(d) De-merit goods are goods that the government believes are bought in excessive quantities in free markets e.g. tobacco.

One way of reducing the volume of a de-merit good that is purchased is to levy taxation upon it.

The impact of this on the price of the demerit good will depend upon the extent to which the effective incidence of the tax falls upon the consumer; however, given that, the greater the price elasticity of demand of the good the more demand for the good will fall as a result of a given increase in its price. *(4)*

(e) **(i)** If a product has a PED of less than one it means that a given percentage change in price leads to a lower percentage change in quantity demanded, ceteris paribus. In contrast a PED greater than one signifies that a given percentage change in price generates a larger percentage change in demand, ceteris paribus. *2*

(ii) The effect of an indirect tax is to increase the price to the consumer of any product it is levied upon. The income generating potential of such a tax is greatest when the products concerned have PED's of less than one, since the increase in price is accompanied by a less than proportionate reduction in demand. *3*

(5)

Broadly this question is to be marked on the basis of 1 mark per point made up to the specified maxima.

(30)

Question 3

(a) A tax is a compulsory levy made by public authorities for which nothing is received directly in return.
End user charges are tied to the receipt of particular goods or services whose use is often discretionary. *(3)*

(b) The general principle is that charges should be set to recover the full costs of production, including a cost of capital, which was originally set at 6% and subsequently reduced to 3.5%.

For statutory services charges should not be set so as to deliberately generate a surplus.

Charges for commercial services could deviate from the full cost principle in either direction in cases of excess demand or excess capacity.

However, in no circumstances should any charges be set lower than the marginal cost of production.

1 mark per point well made up to a maximum of (4)

(c) Charging is equitable in the sense of linking the amount paid by a user to the benefit received. Relatedly, it avoids the problem of non-users subsidising users, encountered when services are funded out of general taxation.
Eg charging for car parking; this invariably conforms to the equity criterion by relating payment to duration of parking.

Charging for services acts as a means of rationing services and avoids the problems of over supply associated with free at point of use provision.
Eg some commentators have suggested that charging for some general practitioner appointments would eliminate “unnecessary” consultations.

Charging for services at full cost (which is widespread in the UK public sector) contributes towards the efficient allocation of resources. This means that resources are allocated to only produce outputs that are valued by the recipients at least as much as the value of the resources used to produce them.

Charging can help generate a relationship of accountability between the provider organisation and the recipient of services. For example, a person paying for a recycling collection service may be more likely to complain if this service is substandard than somebody who is not paying. As a result service quality is likely to be improved.

People are more likely to care for and minimise their use of goods or services they have paid for directly compared to free at point of use provision. Congestion charges are example of charges that have a substantial impact on people’s usage rates: as a result such charges can also help pursue wider organisational objectives – environmental ones in this case.

Up to 2 marks per point well made, illustrated with appropriate example up to a maximum of (10)

(d) Baumol divides all economic activity into two categories;

Technologically progressive

Technologically non-progressive.

Technologically progressive activities are typically capital intensive, e.g. car manufacturing; over time the use of increased amounts and quality of capital as a result of technological progress increases labour productivity.

Technologically non-progressive activities are typically labour intensive and lack much opportunity for technological development eg social work. Labour productivity in such activities remains broadly constant over time.

In technologically progressive activities increasing labour productivity is reflected by a corresponding growth in wage rates; consequently unit labour costs remain broadly constant over time.

In non-progressive activities, despite little growth in labour productivity over time, wage rates are pulled up to retain reasonable comparability with wages in the progressive sector. Consequently non-progressive unit labour costs increase over time. Since non-progressive activities are labour intensive anyway this leads to substantial increases in unit costs over time.

Baumol believes that technologically non-progressive activities are disproportionately located in the public sector.

Consequently unit costs in the public sector tend to rise more quickly than do private sector unit costs.

Other things remaining equal this leads to a growth in government expenditure as a proportion of overall economic activity. *(9)*

(e) Some investment in eg education and health is simply to increase capacity ie to increase the ability to continue to provide technologically non-progressive activities. This would be true of investment in new buildings to an extent.

Other investment in capital equipment eg medical technology, IT etc has made services technologically more progressive; over time this would be intended to constrain growth in revenue costs and consequently may result in constraining the growth of public expenditure for a given rate of growth in service provision.

A less predictable issue is the impact on quality of service of the latter form of investment.

1 mark per point made up to a maximum of (4)

(30)

Question 4

(a) **(i)** The Public Works Loans Board (PWLB) was absorbed into the Debt Management Office 2002; it lends to local authorities at fixed and variable rates set with reference to rates in the secondary market for gilts.
Thus it seeks to make the lower rates at which central government can borrow available to local government (and some other public bodies).
At 2004 around 83% local authority borrowing came from the PWLB, who are generally prepared to lend up to local authorities' authorised limits for external debt. *4*

(ii) Both approaches are conservative, as befits risk averse public sector bodies, with both investing the majority of their funds with banks.
However, external fund managers tend to make significantly less use of building society deposits and substantially more use of government bonds, which could be seen as inherently riskier than bank or building society deposits as their prices fluctuate on the secondary market. *3*

(7)

(b) **(i)** Certificates of deposit are negotiable instruments issued by banks in return for fixed time deposits, normally for 3 or 6 months.
They bear interest which is payable to the holder at redemption.
The fact that they are negotiable means that they are an appropriate liquid investment for public sector treasury managers; although it also means that they tend to bear a lower rate of interest than normal time deposits for the corresponding period. *4*

(ii) Commercial paper is issued by large corporations as a form of short term borrowing. It is issued at a discount to its maturity value and usually has a duration between 5 and 45 days. While its liquidity makes it an appropriate investment the UK market is relatively small. *3*

(iii) The discount market is the market in which treasury and commercial bills are issued, traded and redeemed.
Such bills are extremely liquid for the following reasons

- they are short term
- the secondary market is very active
- the government is highly unlikely to default in redeeming treasury bills
- many commercial bills are 'accepted' by banks, guaranteeing their redemption.

This makes the bills a very appropriate investment for public sector treasury managers. *5*

(12)

(c) Compliance with the CIPFA Code of Practice for Treasury Management in the Public Services.
Compliance with the good practice set out here will assist in managing legal and regulatory risk i.e. failure to comply with statutory and regulatory requirements and the risk of fraud, error and corruption.

Upper limits on fixed and variable rate exposures.
These can be measured in terms of either

- Interest payable minus interest receivable.
- Principal outstanding in respect of borrowing minus principal outstanding in respect of investment.

These assist in the management of interest rate risk ie that fluctuations in interest rates lead to either reduced income or increased costs.

Upper and lower limits on the maturity structures of (fixed rate) borrowings.
The amount of fixed rate debt maturing in each period specified is calculated as a percentage of total fixed rate debt.
This indicator assists in managing refinancing risk i.e. the risk that fixed rate debt will mature and require refinancing at a time when interest rates are unexpectedly high.
It helps ensure that large proportions of fixed rate debt are not due to mature during the same period.

Upper limit to principal invested that is due to mature each financial year beyond 364 days.
This assists in the management of market risk i.e. the risk that an organisation will need to liquidate assets at a period when market prices have fallen and will consequently make a capital loss.

1 mark per point well made up to a maximum of (11)

(30)