2. Loan capital

XYZ plc needs a sum of 21m, and to rise — Bonds OR alternative a bank term loan.

BONDS

1. Bond price — coupon rate 4% => £100 × 4%

$1-5 \quad £4 \times PVIFA_{5\%,5} = £16$

$5 \quad £100 \times 1/1.05^5 = £78$

$£94$

No. of bonds = 21m/94 = 223,404

Amount to redeem the bonds = 223,404 × £100 = £22.34m

IF ZERO-COUPON : 1 - 5 £100 × $1/1.05^5$ = £78

BANK LOAN

2.

	1	2	3
op. Bal	21m	15.75m	10.5
Interest	1.26	0.945	0.63
Repayment	5.25	5.25	5.25
Outflow	6.51	6.195	5.88

6%

21m/4years

3. IF REPAYMENT OF BOTH PRINCIPAL AND INTEREST in MONTHLY instalments

$PVIFA_{0.5\%,48} = 42.5803$

6/12 = 0.5

4 years × 12 = 48

$$PMT_{\text{monthly payment}} = \frac{P(\text{loan})}{PVIFA} = \frac{21m}{42.5803} = £493,185 \text{ p.m.} \Rightarrow 493,185 \times 12 = £5.918m \text{ each year}$$