
FE
Tax and Dividends
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Taxes – Part 1
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Taxes are **costs** to a **project** which need to be **modelled like any other cost**

Need to distinguish between

VAT

Temporary cash flow only, recoverable if project company is supplying goods/services subject to **VAT**

Sales Taxes and **Customs Duties**

Permanent loss of cash - project expense / increased procurement cost

Taxes on Profits

Income or corporate tax: Permanent loss of cash - project expense

VAT Example

	Excl VAT	+ VAT 20%	Incl VAT
Sales	100.0	20.0	120.0
Purchases	60.0	12.0	72.0
Net Margin	**40.0**	**8.0**	**48.0**

What is the true **net margin to the business?**

£40 or £48?

Duty Example

Imported Component		$1,000.00
Exchange Rate		1.21
Cost in £		£826.45
Customs Duty	10.0%	£82.64
Cost including Duty		**£909.09**

What is the **true cost to the business?**

£826 or £909?

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Income/Corporate Tax

Tax Payable = Taxable Income x Tax Rate

Global Tax Rates

Tax rate applies in the **country in which we are operating**

Making a Loss

They will pay no tax, but they do get the right to use that loss at some future period

Net Operating Loss

Next time the business has **positive taxable income**, we will **deduct any losses** from previous years

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Depreciation Rates

Companies can **decide their own depreciation rates**

Depreciation allowance is set down in **legislation**

Difference between depreciation

- **Income statement**
- **Internal rate**
- **Rate for tax return**

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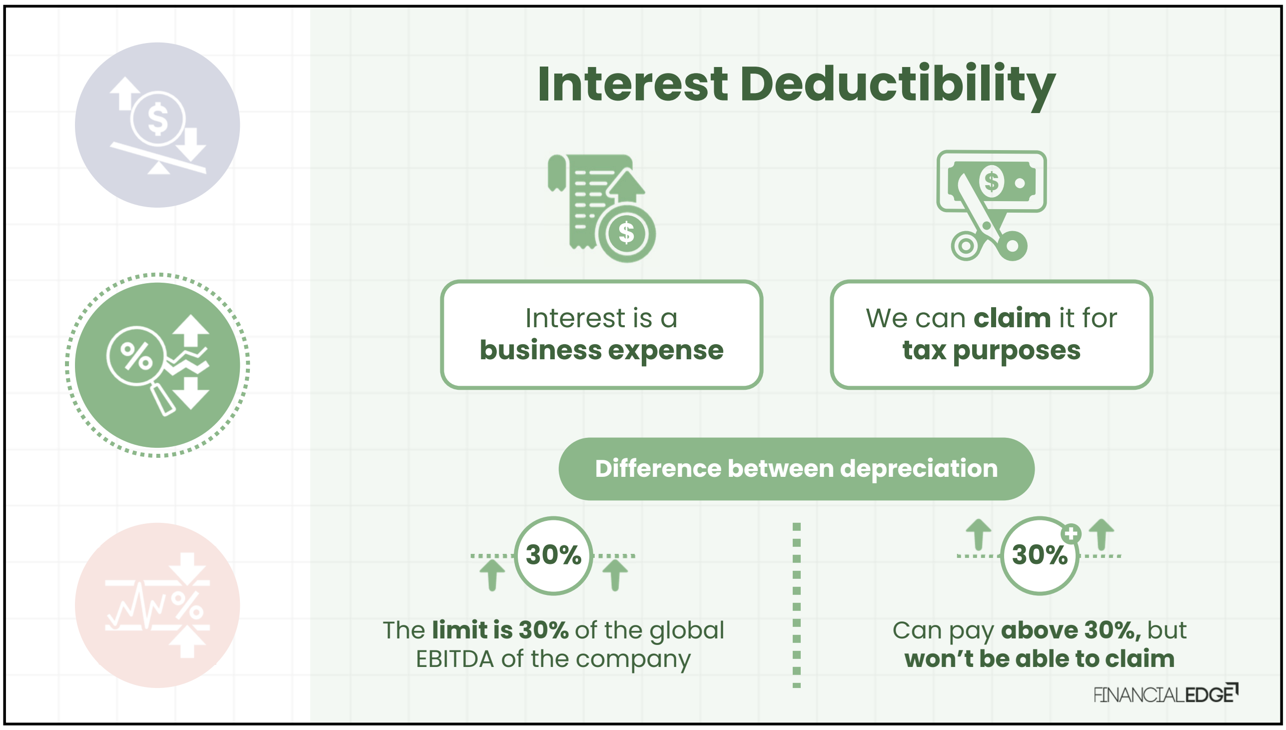
Interest Deductibility
Interest is a business expense
We can claim it for tax purposes
Difference between depreciation
30%
The limit is 30% of the global EBITDA of the company
30%
Can pay above 30%, but won't be able to claim
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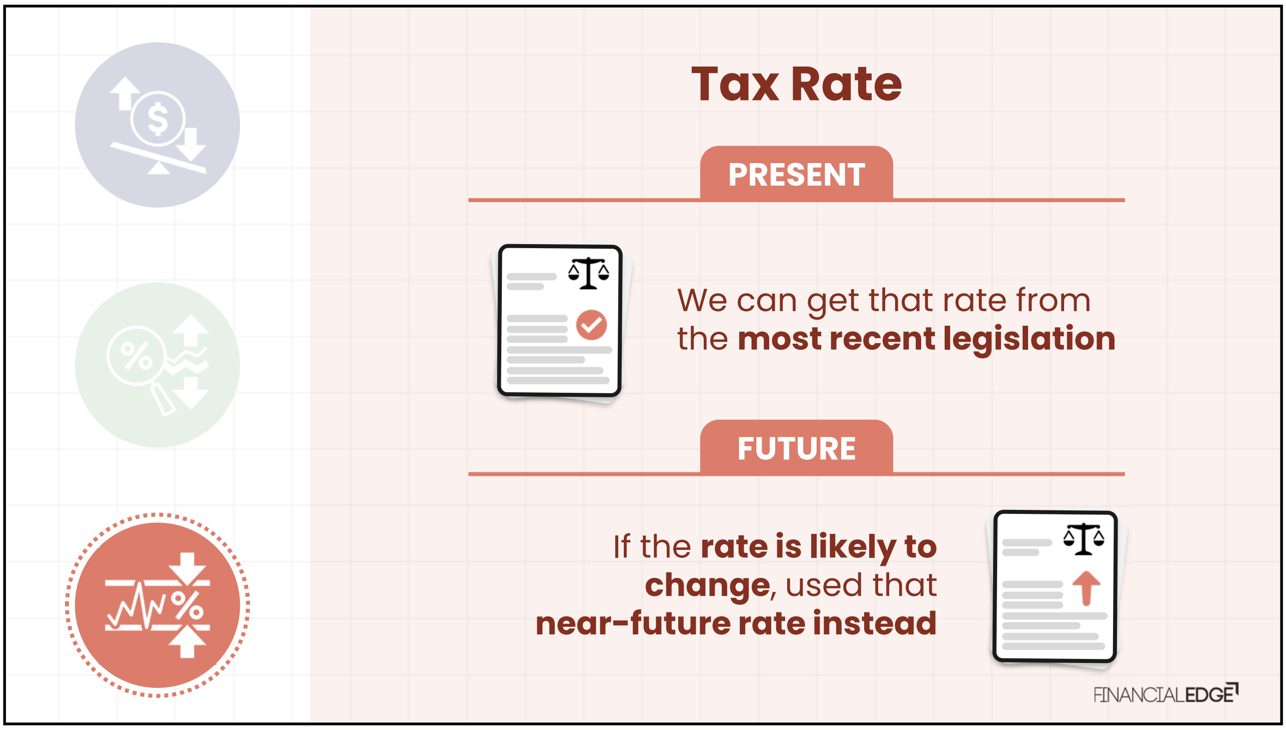
Tax Rate
PRESENT
We can get that rate from the most recent legislation
FUTURE
If the rate is likely to change, used that near-future rate instead
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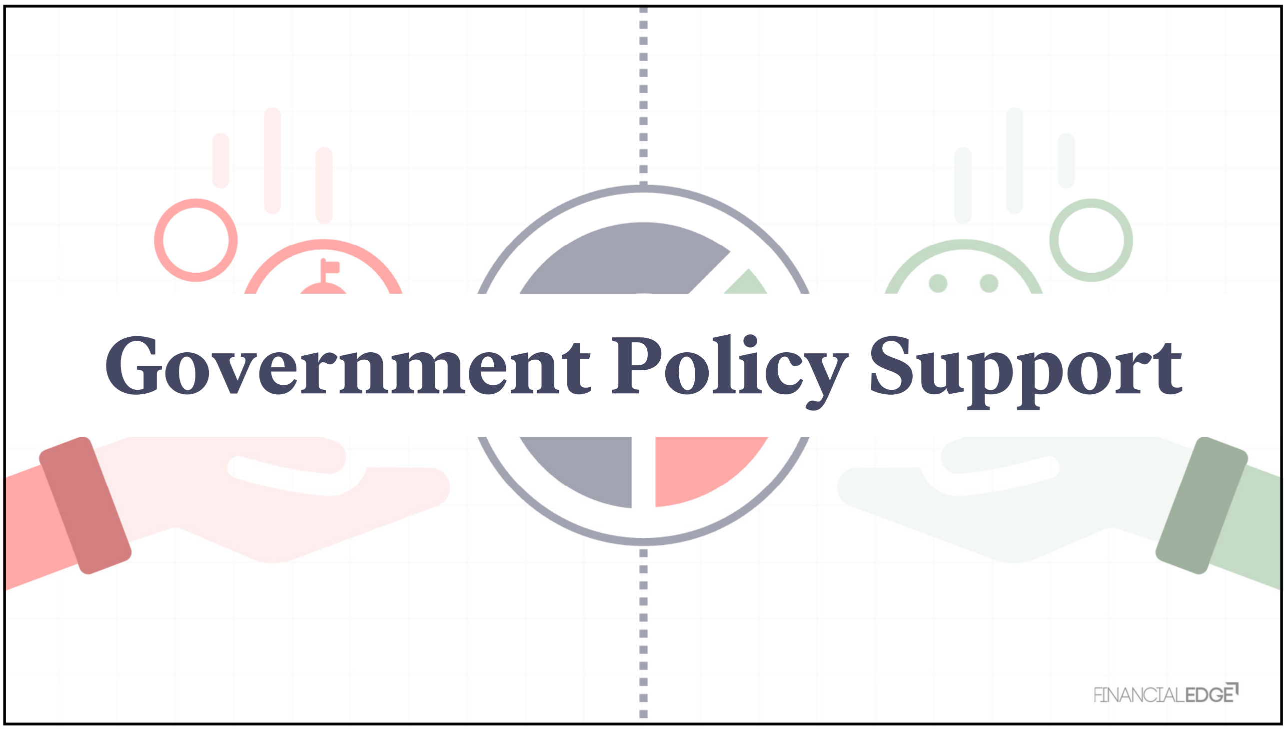
Government Policy Support
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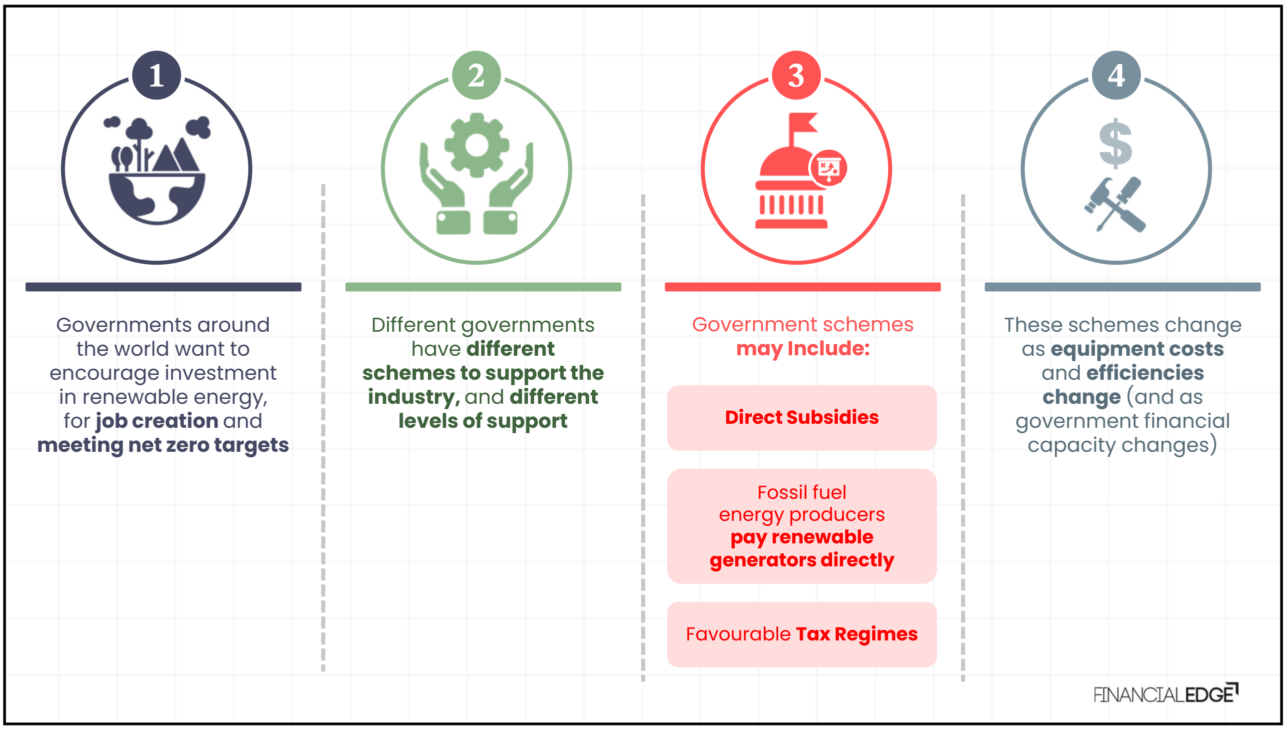
1
Governments around the world want to encourage investment in renewable energy, for **job creation** and **meeting net zero targets**
2
Different governments have **different schemes to support the industry,** and **different levels of support**
3
Government schemes **may Include:**
Direct Subsidies
Fossil fuel energy producers **pay renewable generators directly**
Favourable **Tax Regimes**
4
These schemes change as **equipment costs** and **efficiencies change** (and as government financial capacity changes)
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Government Policy Support - UK

UK government **support for new schemes** is **not as generous** as it was

This is due to **improved project viability** from **lower capex** and **operating costs**

UK Government	
100% Annual investment allowance	Limited to **£1m pa**
100% Capital allowance for **energy-saving** equipment	N/A to **energy-generating** equipment
Smart Export Guarantee Regime: Obligation on power resellers to buy from small-scale producers	Only **small-scale** operators eligible
Renewables Obligation Certificates (ROCs): Fossil-fuel generation operators required to buy credits from **renewable energy schemes**	Closed to new schemes in 2017; continues for up to **20 years** for **pre-2017 schemes**
Contracts for Difference (CFD): Government-owned company sets unit price (via an auction) with **renewable energy operator & covers difference market price vs contract price** (and takes any upside)	**Replaced ROCs** from 2017. Very small direct subsidies available (up to £10m)
5-Year rent-free lease of seabed from Crown Estate	Applies to **offshore wind farms**

Contracts for Difference (CfD)

Some small **direct subsidies available**

Most renewable schemes would **not be able to take advantage of them**

Crown Estate

Rent free lease for the **first five years**

After 5 years, **include rent in model**

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U.S Federal Government

Production Tax Credits

Reduces taxable income for each MWh of power generated

Investment Tax Credits

Extra % of initial capex deductible for tax, with an uplift for using domestically-produced materials and location in certain areas.

Can be transferred to 3rd party ("Tax equity financing")

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German Government

Feed-in -tariffs

- **Ended for new solar projects** 2017, new wind projects 2021.
- Funded by levy on consumers, will end 2023.

Auction tender for **capacity volumes**

- Market forces are **reducing the subsidy** sought by bidders

Partial tax exemption on **small-scale operators**

- **On own electricity consumed** ("cannibalisation")

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Other Governments

Spain

Tax incentives in the form of **extra taxes on non-renewable sourced energy**

France

EDF enters into **CfD** arrangements with **renewable producers**

Australia

Tradeable **small-scale technology certificates** (stcs)

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Modelling Implication of Support Programs

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Tax Incentives	**More complex tax calculations,** may need to assume when the **incentive will end:** you may need a tax expert to review the calculation
Direct Subsidies	Include as **revenue in the model**
Indirect Subsidies (eg ROCs or similar)	Include as **revenue based** on the level of tradeable credits from the project, at **current market price + inflation**
Power Purchase Obligations:	Include as **base revenue** at **current market price + inflation;** take care to reduce the **offtake** when those **obligations expire** (conservative) or assume the **power can be sold at market price** (optimistic)
CFDs: Only model the base revenue	Differences between **market prices** and **reference price** will be **paid by / to the operator,** so the price is **effectively fixed**

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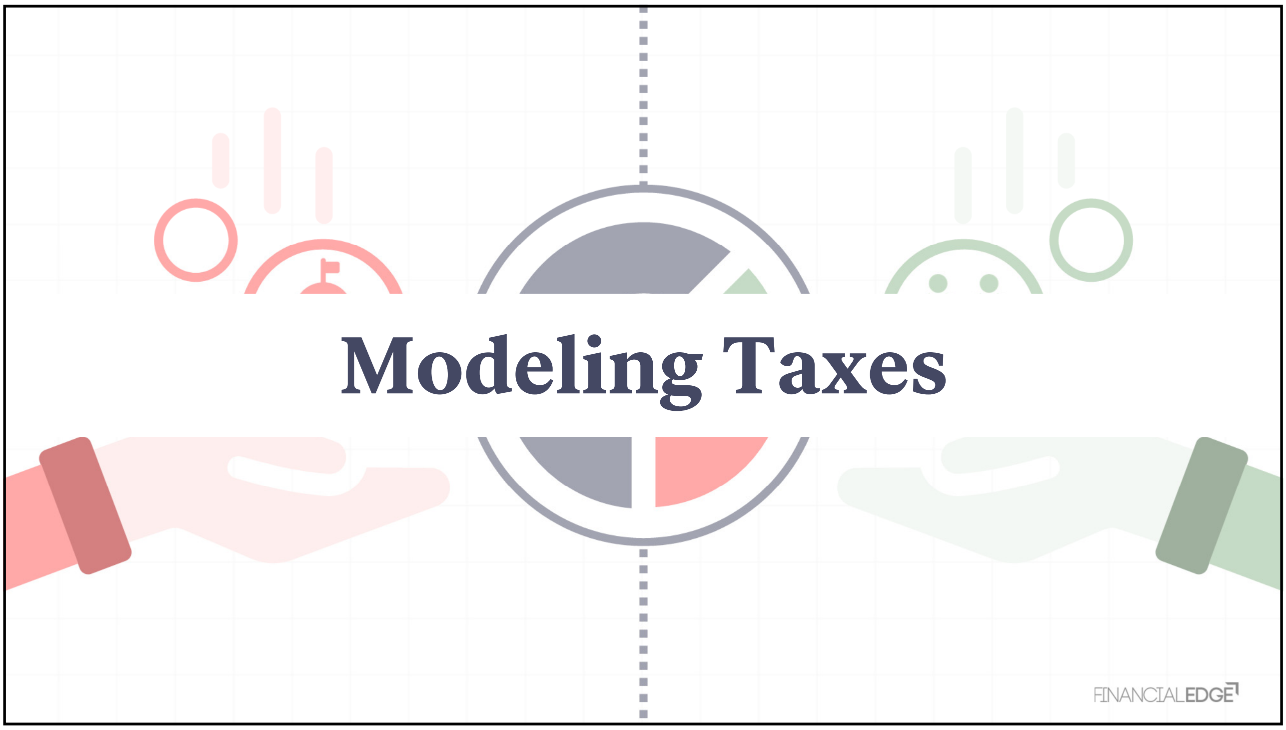
Modeling Taxes
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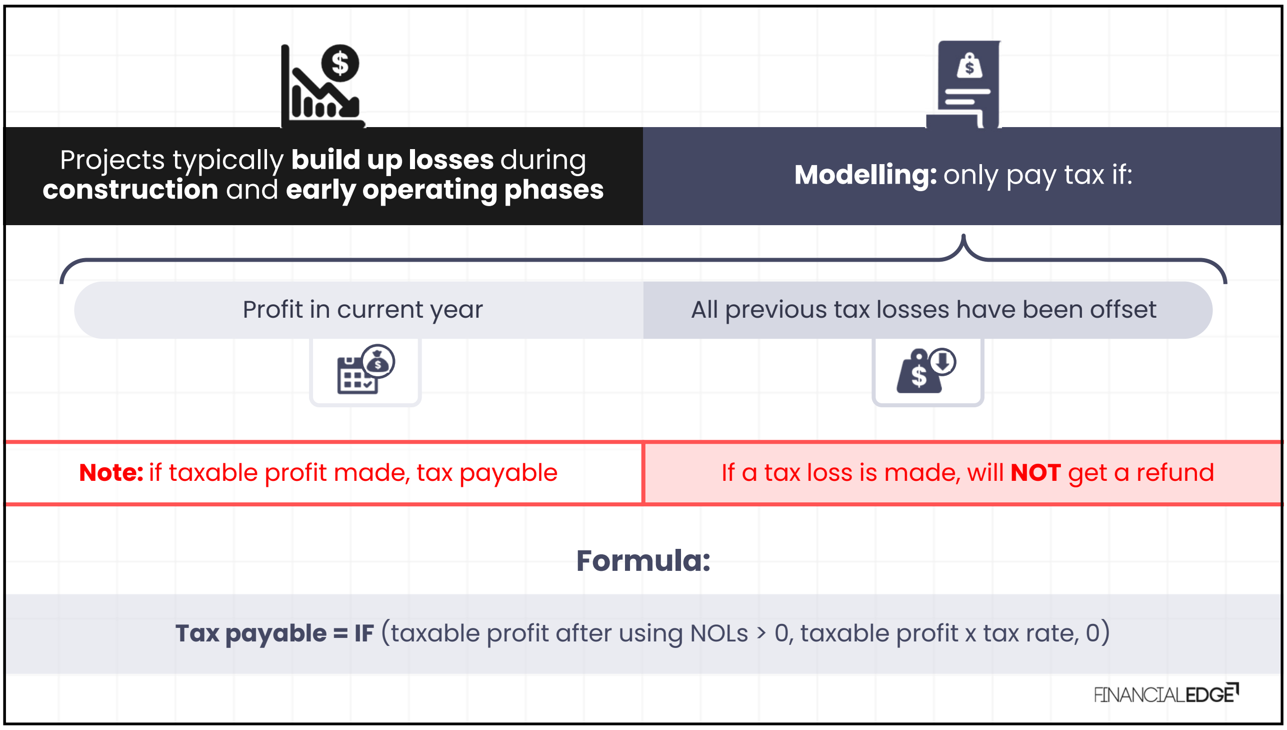
Projects typically **build up losses** during **construction** and **early operating phases**
Modelling: only pay tax if:
Profit in current year
All previous tax losses have been offset
Note: if taxable profit made, tax payable
If a tax loss is made, will **NOT** get a refund
Formula:
Tax payable = IF (taxable profit after using NOLs > 0, taxable profit x tax rate, 0)
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These losses (known as NOLs) are **accumulated & offset vs future profits**

Add another line into the **tax calculation** to check if there are any **NOLs to be used up:**

Taxable Income	100	
Loss to Offset	(20)	Carried forward from **last year**
Tax Paid On	80	
Tax Rate	20	

Formula:

= IF (last year's taxable income < 0, last year's taxable income, 0)

Tax Depreciation

1. Depreciation is an **income statement expense = cost of assets,** spread **over** their **estimated lives**
2. For tax calculations, may be permitted to use a **higher rate of depreciation**
3. This reduces **the taxable profit in early years** (and reduces the tax to pay)
4. This **improves the project's NPV**

Tax Shield of Interest

1

Debt interest is a **tax deductible expense**
(within thin capitalisation rules)

Tax Shield of Interest

2

Thin capitalisation rules are **limits on interest deductions** set by **tax laws**

Tax Shield of Interest

3

Within **those rules,** the more **interest we pay,** the lower the **tax payable**

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Tax Shield of Interest

4

Interest cost after tax = Interest rate x (1 – tax rate)

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Modelling Tax Payments

Once calculated how much **tax is owed,** when **will it be paid?**

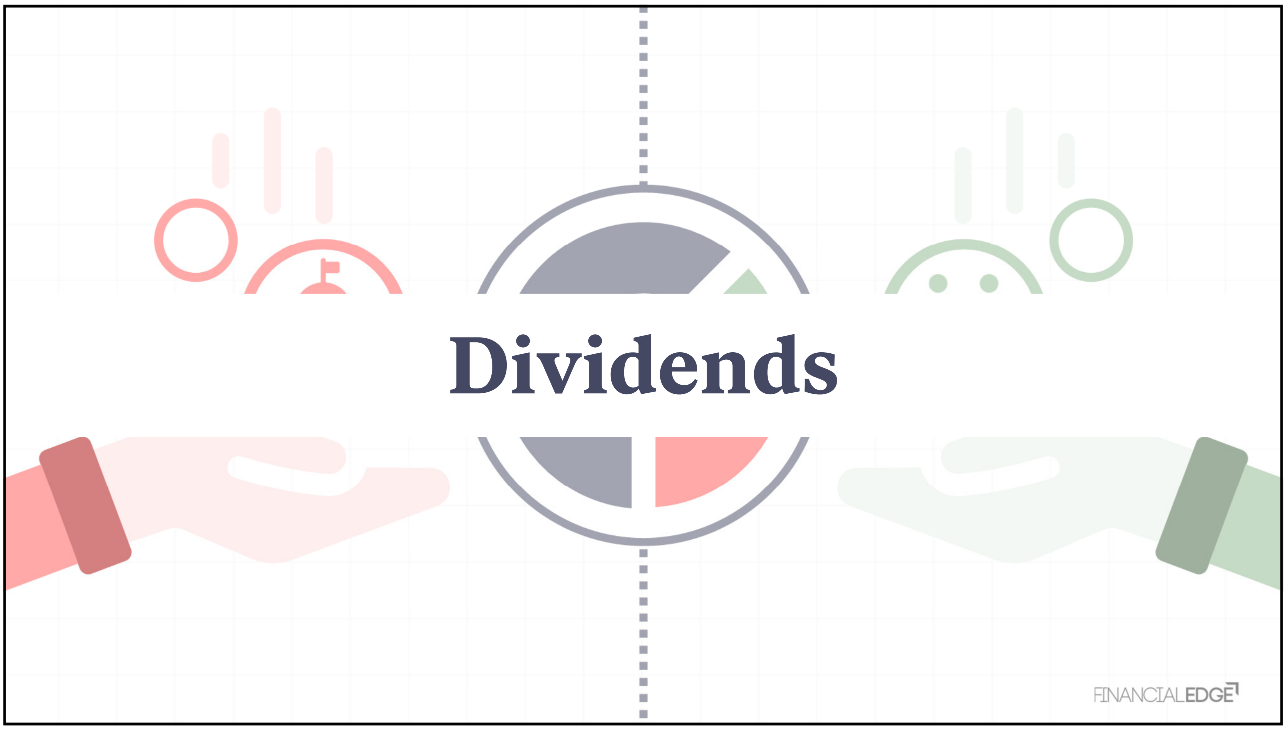
Usually, have to **pay in instalments: some now, some later**

The **% paid** this **year vs next year** is an **assumption**

Any amount owing but not yet paid goes on **the balance sheet**

Tax to pay	Tax to paid	Tax not yet paid
Income Statement	Cash Flow	Balance Sheet

In an annual model, the formula for cash outflow each year is:
= This year's tax x % payable now + last year's tax x (1 - % payable now


Dividends
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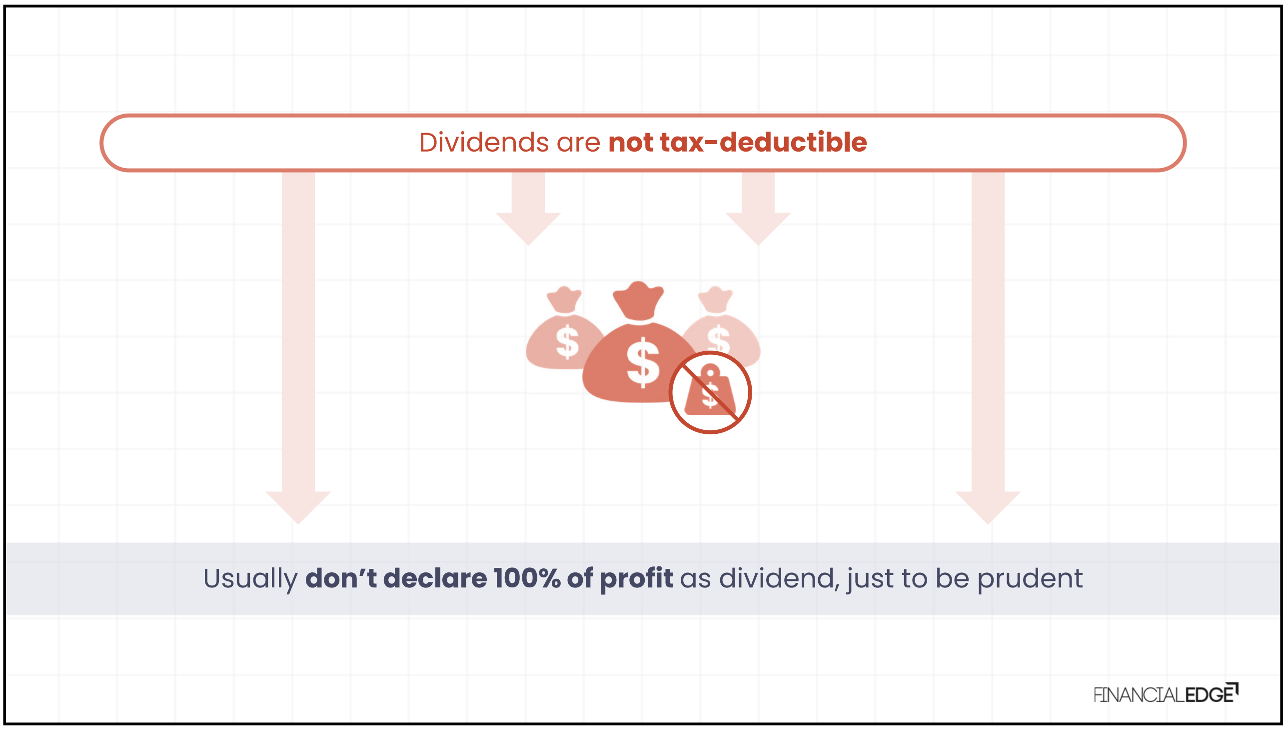
Dividends are **not tax-deductible**
Usually **don't declare 100% of profit** as dividend, just to be prudent
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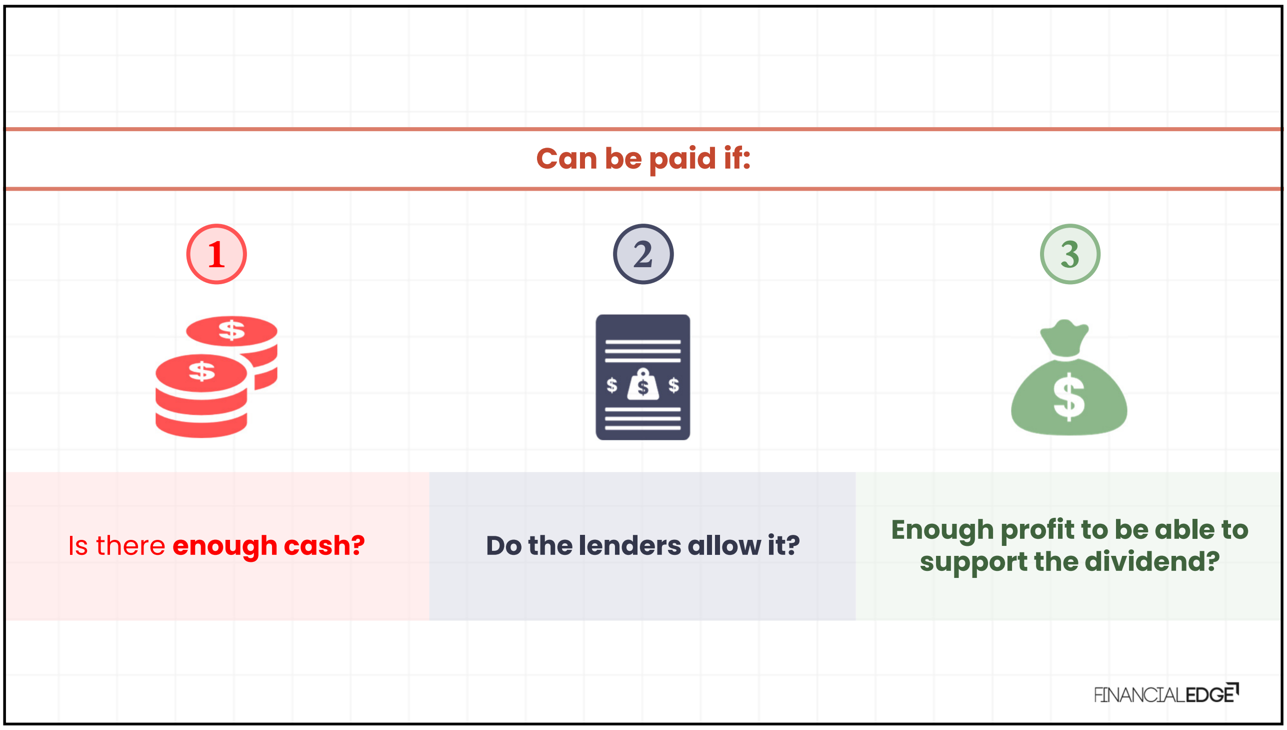
Can be paid if:
1
2
3
Is there **enough cash?**
Do the lenders allow it?
Enough profit to be able to support the dividend?
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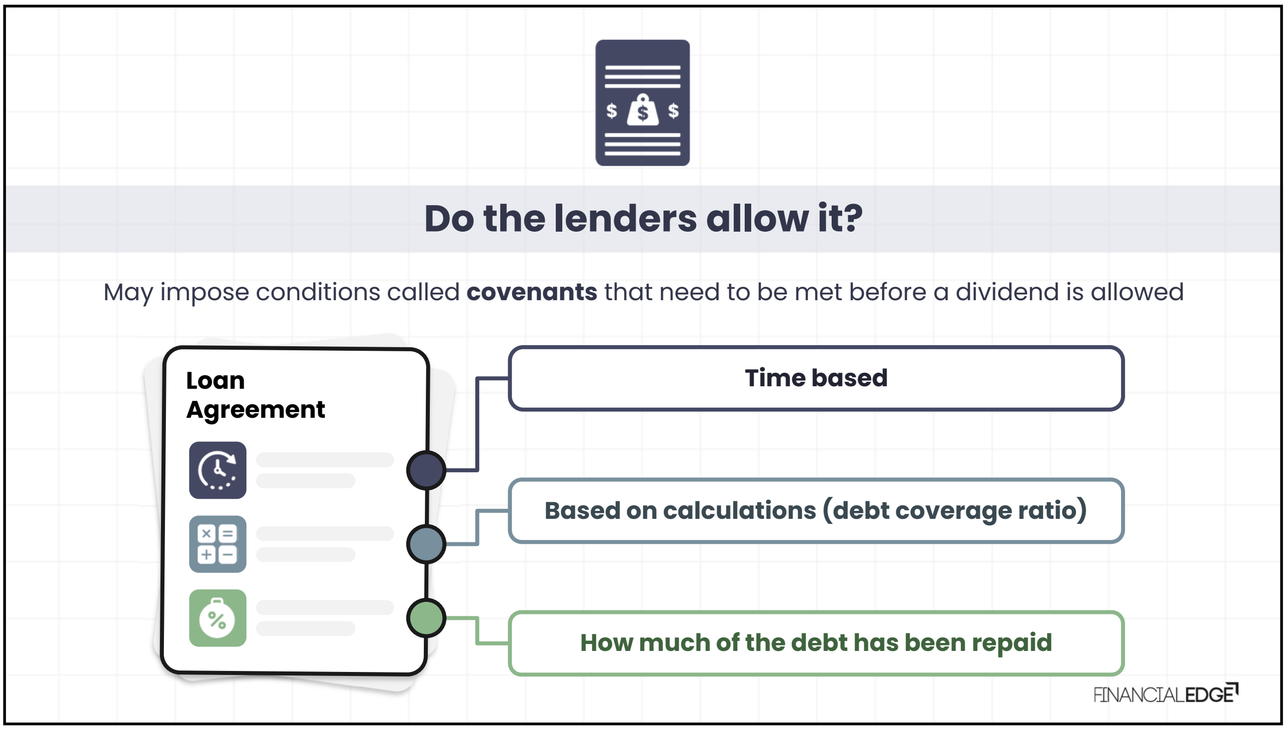
Do the lenders allow it?
May impose conditions called **covenants** that need to be met before a dividend is allowed
Loan Agreement
Time based
Based on calculations (debt coverage ratio)
How much of the debt has been repaid
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Do the lenders allow it?

May impose conditions called **covenants** that need to be met before a dividend is allowed

Dividend Formula

=

IF(condition is met, cumulative retained profit x % payout, 0)

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