

Payback period

Show how long the money is at risk: the time until the cash coming back equals the cash put in.



Illustrative: €200k now, then €80k a year for 3 years, arriving evenly. Discounted at 5%, payback is $2 + 51 \div 69 \approx 2.7$ years.

WHAT IT IS

Payback is when the running total of net cash flows reaches zero, assuming even in-year flow. **Discounted payback** uses present values, so it comes later. It ignores cash after that point, and the simple form ignores the time value of money (Park, 2007). Use it beside NPV (net present value), never alone.

HOW IT WORKS

- 01 Add the net cash flows year by year, the investment first.
- 02 Find the year in which the running total turns positive.
- 03 $\text{Payback} = \text{years before it} + \text{shortfall} \div \text{that year's cash}$.
- 04 Discounted payback: the same, with present values.

MID-LEVEL · WORKED EXAMPLE

Apply it well

The situation: A city team moves resident parking permits online in eight months for €640k; net savings are €140k in year 1, then €250k a year for three years.

Running total -640, -500, -250, 0: payback 3.0 years.
Discounted at 5%: -640, -507, -280, -64, +142, so $3 + 64 \div 206 \approx 3.3$ years. The project manager adds the NPV for the value.

In the exam: Show the running total, the step within the year and both paybacks; then say what payback ignores.

SENIOR · WORKED EXAMPLE

Design and lead it

The situation: A city is joining 14 online services under one login over 30 months, in phases; each group of services starts saving at a different time.

The project manager shows payback per phase and in total, agrees with the Chief Financial Officer which savings are real cash, and asks the board whether a payback limit suits services the city must provide.

In the exam: Treat payback as one lens. Explain why a strict payback limit can reject the option with the most value.

WHERE IT SITS

IPMA · ICB4	PMI · PMBOK® GUIDE 8 · PMP® EXAM	APM · BOK 8 · PMQ EXAM
4.5.7 (p. 124): cash flow and rates of return among the finance knowledge; 4.3.1.3 (p. 42): the justification	Guide §2.4.1 (p. 59): payback period among the financial value metrics. Exam outline: Process task 3	BoK (APM's Body of Knowledge) §2.3.1: payback not named; simple measures (value ratio, net benefit, ROI) and discounted ones. PMQ (APM's Project Management Qualification) objective 4

Sources: Park, Contemporary Engineering Economics (4th ed.); Kerzner, Project Management: A Systems Approach (11th ed.); PMI, PMBOK® Guide, 8th ed.; PMI, PMP® Examination Content Outline (2026); APM Body of Knowledge, 8th ed.; APM, PMQ handbook (v6, 2026); IPMA ICB4 (2015)

Key: IPMA = International Project Management Association; ICB4 = IPMA's Individual Competence Baseline (4.5.7 etc.: its competence elements); PMI = Project Management Institute; PMBOK® Guide = PMI's body-of-knowledge guide; PMP® = PMI's Project Management Professional; APM = Association for Project Management; IRR = internal rate of return. Unofficial study material for IPMA®, PMI® and APM exams. Not affiliated with, endorsed by or approved by IPMA, PMI or APM, and not an accredited or endorsed training provider. IPMA® and IPMA ICB® are registered trademarks of IPMA in Switzerland and other countries. PMI, PMP, CAPM and PMBOK are registered marks of Project Management Institute, Inc. APM is a trade mark of the Association for Project Management. Other marks belong to their owners. PMP® exam facts are from PMI's public PMP® Examination Content Outline (2026); check the current version on pmi.org. APM's qualifications are its own; this series is not an APM Accredited Provider or APM Endorsed. Examples use a fictional city and its projects. Levels (this series' labels): Mid-level = moderately complex projects (IPMA Level C, PMI's PMP®); Senior = complex projects and people (IPMA Level B, APM's Chartered Project Professional).

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