



DEBT MARKET

Duration and interest-rate risk

One number that says roughly how far a bond, or a debt fund, moves when yields change

Yields as on 1 September 2026; fund assets as on 31 August 2026

For training and education only. Not investment advice.

Duration turns 'longer bonds move more' into a number.

It is measured in years. Read as a sensitivity, it says roughly how many per cent a bond's price moves when its yield changes by one percentage point.

Three terms to keep apart



Maturity

The time until the bond's last payment. It ignores every coupon paid before that date.



Macaulay duration

The average time the holder waits for the bond's money, each payment weighted by what it is worth today. Measured in years.



Modified duration

Macaulay duration $\div$ (1 + yield). Roughly the percentage change in price for a one percentage point change in yield.

Yield changes are quoted in basis points: 1 basis point is 0.01 percentage point.

Macaulay duration: an average wait

The ₹1,000 bond with a 7% coupon from the last deck, with five years left, when the market yield is 7%.

Year	Payment	Worth today at 7%	Year × worth today
1	₹70	₹65.42	65.42
2	₹70	₹61.14	122.28
3	₹70	₹57.14	171.42
4	₹70	₹53.40	213.60
5	₹1,070	₹762.90	3,814.50

Worth today adds up to ₹1,000.00, the price. The last column adds up to 4,387.22. Macaulay duration = $4,387.22 \div 1,000 = 4.39$ years. Illustration with assumed figures.

Modified duration: the rule of thumb, tested

THE SET-UP

The same bond: ₹1,000 face value, 7% coupon, five years left, priced at ₹1,000.

Macaulay duration: 4.39 years.

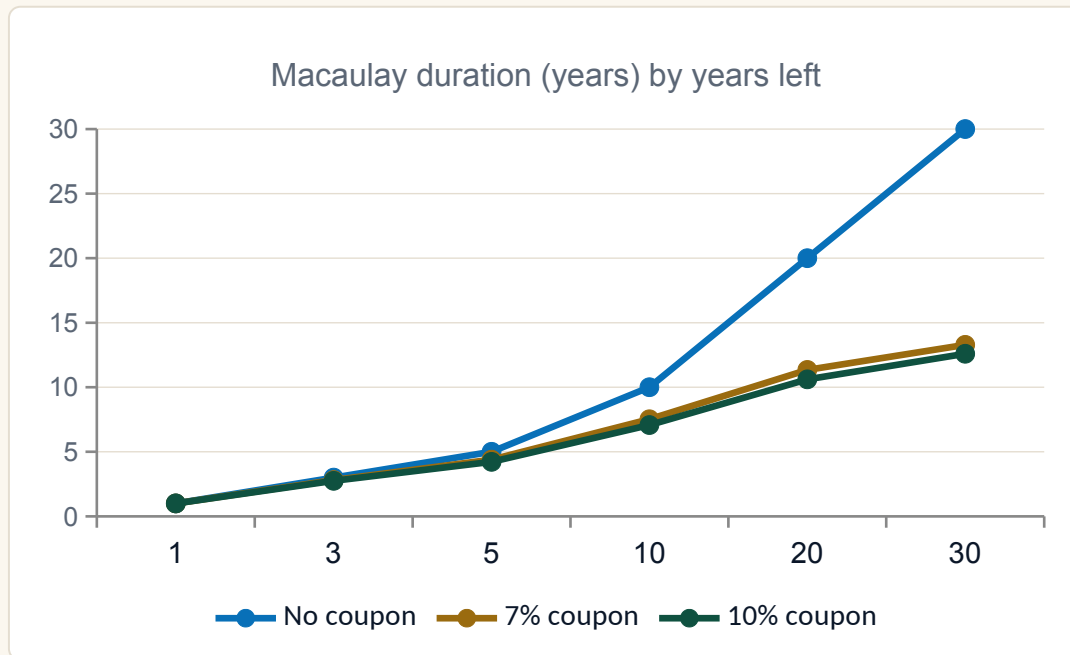
Modified duration = $4.39 \div 1.07 = 4.10$.

- 1 The rule: change in price $\approx$ -modified duration $\times$ change in yield, with the change in yield in percentage points.
- 2 Yield rises from 7% to 8%. Estimate: $-4.10 \times 1 = -4.10\%$, a price of ₹959.00. Full calculation: ₹960.07, a fall of 3.99%.
- 3 Yield falls from 7% to 6%. Estimate: $+4.10\%$, a price of ₹1,041.00. Full calculation: ₹1,042.12, a rise of 4.21%.
- 4 Yield rises by half a point to 7.5%. Estimate: -2.05% . Full calculation: ₹979.77, a fall of 2.02%.

Duration gives a close estimate, not the exact figure. The gap grows as the change in yield grows.

Illustration with assumed figures. Not a forecast.

What makes duration longer



Read the chart

- Longer maturity, longer duration. With coupons, duration grows more slowly than maturity.
- A 30-year bond with a 7% coupon has a duration of 13.28 years.
- Lower coupon, longer duration. With no coupon, duration equals maturity.
- A higher market yield shortens duration a little.

Illustration: computed for annual-coupon bonds at a 7% market yield. Assumed figures. Points are not evenly spaced in time.

SEBI sorts debt funds by Macaulay duration

Seven of SEBI's 17 debt fund categories are defined by the Macaulay duration of the whole portfolio.

Fund category	Portfolio Macaulay duration	Illustration: approx. fall if yields rise 1 point
Ultra Short Term	3 to 6 months	0.25% to 0.5%
Ultra Short to Short Term	6 to 12 months	0.5% to 1%
Short Term	1 to 3 years	1% to 3%
Medium Term; Medium to Long Term	3 to 4 years; 4 to 7 years	3% to 4%; 4% to 7%
Long Term; 10-year Constant Maturity Gilt	Over 7 years; equal to 10 years	Over 6.5%; under 10%

Source: SEBI Master Circular, 20 Mar 2026, para 3.8.2. Last column: our illustration, Macaulay duration x 1 (a little high), before interest earned.

What 'duration management' means

Within the limits of its category, the fund manager chooses how long the portfolio's duration should be.

The manager expects yields to fall

- Lengthens duration: buys longer bonds and sells shorter ones.
- If yields do fall, the longer portfolio gains more.
- If yields rise instead, it falls more.

The manager expects yields to rise

- Shortens duration: holds shorter bonds or more cash.
- If yields do rise, the shorter portfolio falls less.
- If yields fall instead, it gains less.

It is a judgement about future rates, and it can be wrong. The category band limits how far it can go.

Source for the category limits: SEBI Master Circular for Mutual Funds, 20 March 2026, para 3.8.2.

Where things stand

Yields on 1 September 2026 and fund assets on 31 August 2026. They change; check the date.

INDIA 10-YEAR G-SEC YIELD

6.96%

Yield on the 6.94% GS 2036, the 10-year benchmark government bond, on 1 September 2026.

RBI POLICY REPO RATE

5.50%

Raised from 5.25% on 7 Oct 2026 (5.25% on 1 Sep 2026).

SHORT TERM FUND ASSETS

₹1.05 lakh cr

₹1,05,045 crore on 31 August 2026. Long Term Funds held ₹11,435 crore.

Sources: RBI Current Rates (10-year yield, 1 Sep 2026); RBI Monetary Policy Statement, 7 Oct 2026; AMFI Monthly Note, August 2026 (category assets).

If you learnt this from older material

What older material says

- Names: Low Duration, Short Duration, Medium Duration, Long Duration, Dynamic Bond.
- 16 debt fund categories (SEBI, 6 Oct 2017).
- Price change = $-\text{modified duration} \times \text{change in yield}$, as if exact.
- No label for a scheme's maximum rate risk.

What holds now

- Names: Ultra Short to Short Term, Short Term, Medium Term, Long Term, Dynamic Term.
- 17 debt fund categories (SEBI, 26 Feb 2026).
- That rule is an estimate, close only for small changes in yield.
- Potential Risk Class I, II or III (since 1 Dec 2021).

The duration bands themselves did not change in 2026. The category names did.

Sources: SEBI circular on categorisation of schemes, 6 Oct 2017; SEBI Master Circular for Mutual Funds, 20 Mar 2026, paras 3.8.2, 3.8.9 and 6.18.

Four things people get wrong



'Duration is the same as maturity.'

Only for a bond that pays no coupons. With coupons, duration is shorter than maturity, because some money arrives early.



'A 4-year duration is a lock-in.'

Duration is a sensitivity, not a holding period. It says how far the price moves, not how long you must stay.



'Short duration means no risk.'

It means less interest-rate risk. Credit risk and liquidity risk are separate, and returns are still not assured.



'A fund's duration is fixed.'

It changes as bonds age and as the manager buys and sells. Look at the latest portfolio disclosure and the category band.

Check yourself

Q1

A bond has a modified duration of 6. Its yield rises by 0.50 percentage point. Roughly how much does its price change?

Q2

Two bonds mature in 10 years. One pays an 8% coupon every year. The other pays no coupon until maturity. Which has the longer duration, and why?

Q3

Yields rose last month. A client's Long Term Fund fell much more than a friend's Short Term Fund. What is the explanation?

Sources and disclaimer

SOURCES FOR THE FIGURES IN THIS DECK

- Debt fund categories and duration bands (para 3.8.2), compliance date (para 3.8.9), Potential Risk Class (para 6.18): SEBI Master Circular for Mutual Funds, 20 March 2026.
- Earlier category names and the count of 16: SEBI circular 'Categorization and Rationalization of Mutual Fund Schemes', 6 October 2017.
- 10-year government bond yield (6.94% GS 2036, 6.9570% on 1 Sep 2026): Reserve Bank of India, Current Rates (page archived 2 Sep 2026).
- Policy repo rate 5.50% from 7 Oct 2026: RBI Monetary Policy Statement, 7 October 2026.
- Short Term and Long Term Fund assets on 31 August 2026: AMFI Monthly Note, August 2026.
- All duration figures, bond prices and the chart are illustrations computed with assumed figures. They are not quotes for any actual bond or scheme.

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