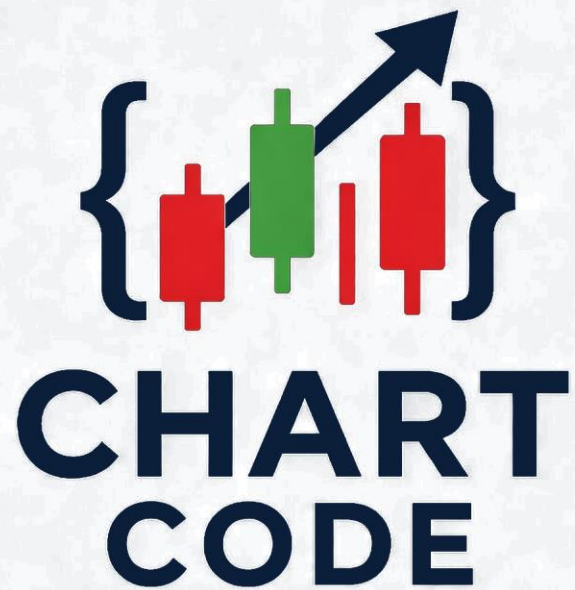




DECODE THE MARKET CODE



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RSI & MACD — How to Use Correctly

RSI and MACD are the two most widely used momentum indicators in the world — and also two of the most widely misused. Learn what they actually measure, and how to use them correctly.

1. Introduction — Why Indicators Matter (and Their Limits)

A technical indicator is simply a mathematical calculation applied to price (and sometimes volume) that tries to make an underlying pattern easier to see. RSI and MACD are both momentum indicators — they do not predict the future, but they do a good job of measuring how fast and how far price has moved recently, which tells you something about how tired or how fresh the current move is. Both indicators are hugely popular, which is itself part of why they work: when large numbers of traders watch the same signal and react to it in similar ways, the signal becomes partly self-fulfilling.

KEY

No indicator generates buy or sell signals in isolation with 100% reliability. RSI and MACD are best used to confirm what price action, chart patterns, and support & resistance are already telling you — not as a standalone trading system.

In this guide, we will cover exactly how RSI and MACD work, the single most valuable signal each one provides (divergence and crossovers), and the mistakes that cause most beginners to misuse them.

2. What Is RSI (Relative Strength Index)?

RSI is an oscillator — a value that moves between 0 and 100 — that measures the speed and size of recent price changes to judge whether a stock has moved too far, too fast, in one direction.



Fig 2.1 — RSI plotted below price, oscillating between 0 and 100 with the 70/30 zones marked.

2.1 How RSI Is Calculated (Conceptually)

Without getting lost in the formula, RSI essentially compares the average size of up-moves to the average size of down-moves over a set lookback period — 14 periods is the standard default used by almost every platform. If recent gains have strongly outweighed recent losses, RSI rises toward 100. If losses have strongly outweighed gains, RSI falls toward 0.

2.2 Overbought and Oversold Zones

The two most commonly watched RSI zones are:

- Above 70 — Overbought: Price has risen sharply and quickly; the move may be getting stretched and due for a pause or pullback.
- Below 30 — Oversold: Price has fallen sharply and quickly; the move may be getting stretched to the downside and due for a bounce.

CAUTION

Overbought does not mean 'sell immediately,' and oversold does not mean 'buy immediately.' In a strong trend, RSI can stay above 70 (or below 30) for a long stretch of time while price keeps climbing (or falling). Treat these zones as a caution flag, not an automatic trading signal.

2.3 RSI Divergence — The Most Valuable RSI Signal

Divergence occurs when price and RSI disagree with each other — and it is widely considered the single most useful signal RSI provides.

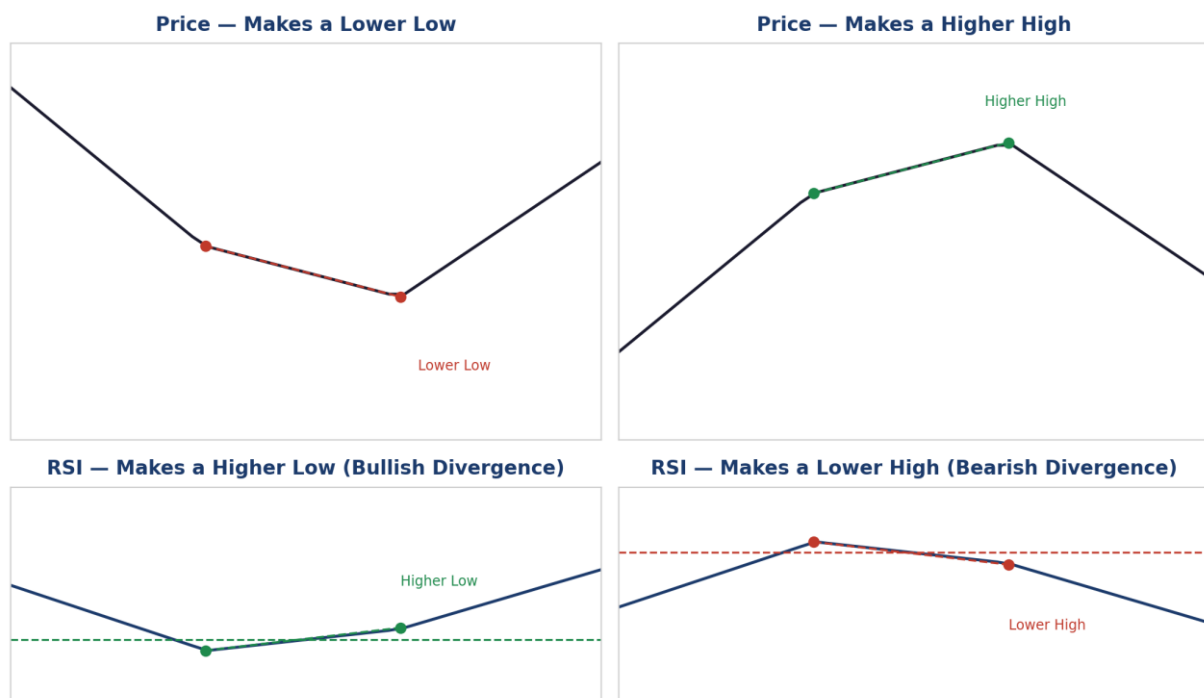


Fig 2.2 — Bullish divergence (price makes a lower low, RSI makes a higher low) and bearish divergence (price makes a higher high, RSI makes a lower high).

- Bullish divergence: Price makes a new, lower low, but RSI makes a higher low instead of following price down. This shows that although price fell further, the selling momentum behind that fall was actually weaker than the previous decline — an early warning that sellers are losing strength.

- **Bearish divergence:** Price makes a new, higher high, but RSI makes a lower high instead of following price up. This shows the buying momentum behind the new high was weaker than the previous rally — an early warning that buyers are losing strength.

□ Concrete Example

Suppose ITC falls from ₹440 to ₹410 (a new low), then bounces and falls again to ₹400 (an even lower low). If RSI printed 22 at the first low but only fell to 28 at the second low — a higher low on RSI even though price made a lower low — that is bullish divergence, a hint that the downtrend's momentum is fading even though the price itself hasn't turned around yet.

3. Common RSI Mistakes

- **Selling purely because RSI hit 70:** In a strong uptrend, this alone leads to exiting winning trades far too early.
- **Buying purely because RSI hit 30:** In a strong downtrend, this alone leads to repeatedly buying a falling knife.
- **Trading divergence without a confirming price signal:** Waiting for price itself to confirm the divergence — for example, with a candlestick reversal pattern or a break of a short-term trendline — before acting.
- **Using RSI on too short a timeframe alone:** A 5-minute RSI reading is far noisier and less reliable than a daily or weekly RSI reading.

4. What Is MACD (Moving Average Convergence Divergence)?

MACD measures the relationship between two moving averages of price to gauge both the direction and the strength of momentum. It is one of the few indicators that combines trend-following and momentum measurement in a single tool.



Fig 4.1 — MACD plotted below price, showing the MACD line, signal line, and histogram.

4.1 The Three Components

- **MACD Line:** The difference between the 12-period and 26-period exponential moving averages (EMA). When the 12-EMA is above the 26-EMA, the MACD line is positive, showing upward momentum; when below, it is negative, showing downward momentum.
- **Signal Line:** A 9-period EMA of the MACD line itself — a smoothed average that helps identify turning points in the MACD line.
- **Histogram:** The difference between the MACD line and the signal line, shown as bars. Growing bars show momentum accelerating; shrinking bars show momentum decelerating, even before an actual crossover occurs.

TIP

The histogram is often the most useful part of MACD to watch closely, because it changes shape before the MACD line actually crosses the signal line — giving you an earlier read on momentum shifting than the crossover itself does.

4.2 MACD Crossovers

The most commonly traded MACD signal is a crossover between the MACD line and the signal line.

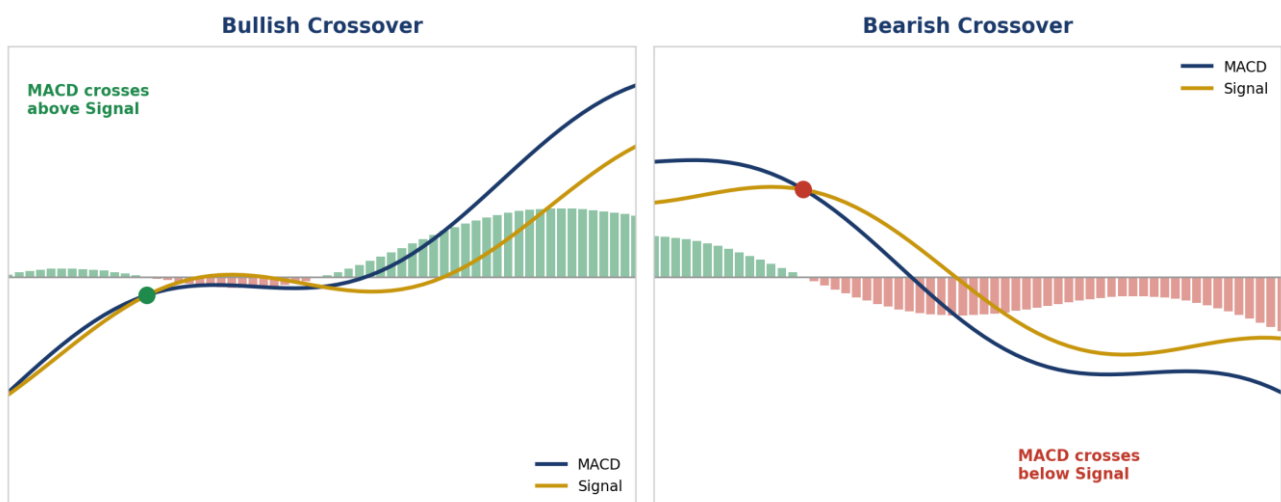


Fig 4.2 — A bullish crossover (MACD crosses above signal) and a bearish crossover (MACD crosses below signal).

- **Bullish crossover:** The MACD line crosses above the signal line, suggesting upward momentum is building. This signal carries more weight when it happens below the zero line, since it suggests a shift from negative to positive momentum.
- **Bearish crossover:** The MACD line crosses below the signal line, suggesting downward momentum is building. This carries more weight above the zero line, suggesting a shift from positive to negative momentum.

4.3 MACD Divergence

Just like RSI, MACD can diverge from price. If price makes a new high but the MACD line makes a lower high, that is bearish divergence — a warning the rally's underlying momentum is fading. The mirror image (price makes a lower low, MACD makes a higher low) is bullish divergence. The interpretation and the caution around trading it in isolation are identical to RSI divergence.

□ Concrete Example

Suppose Larsen & Toubro is in a steady uptrend and its MACD line crosses above its signal line while both are still below the zero line, right after a pullback. This is often read as a fresh 'buy' signal within the larger uptrend, since it suggests the recent pullback has run its course and upward momentum is resuming.

5. Common MACD Mistakes

- Trading every crossover: MACD generates many small crossovers in a sideways, choppy market — most of these are false signals (known as 'whipsaws').
- Ignoring the zero line: A crossover far above or below the zero line generally carries less weight than one occurring near the zero line.
- Treating MACD as a leading indicator: MACD is built from moving averages, which are inherently lagging — it confirms a trend change after it begins, it rarely predicts one in advance.
- Using default settings blindly on every timeframe: The standard 12-26-9 settings were designed for daily charts; they may need adjustment for very short intraday timeframes.

6. Using RSI and MACD Together

RSI and MACD measure momentum from slightly different angles, which is exactly why combining them is powerful: RSI is generally faster and more sensitive to short-term overbought/oversold extremes, while MACD is generally smoother and better at confirming the broader trend direction.

Signal Combination	What It Suggests	How to Use It
RSI oversold + MACD bullish crossover	Short-term extreme, with fresh upward momentum confirming	Higher-confidence long entry, especially near known support
RSI overbought + MACD bearish crossover	Short-term extreme, with fresh downward momentum confirming	Higher-confidence short entry or exit for existing longs
RSI bullish divergence + MACD bullish divergence	Both momentum tools agree selling pressure is fading	Strong early warning of a possible trend reversal
RSI and MACD disagree with each other	Momentum picture is mixed or unclear	Wait for alignment, or lean on price action / support-resistance instead

When RSI and MACD both agree — for example, both showing bullish divergence at the same time near a known support zone — the combined signal is considerably more reliable than either indicator alone.

7. Common Mistakes with Both Indicators

- Using indicators in isolation: Ignoring price action, chart patterns, and support & resistance entirely and trading indicator signals alone.
- Indicator stacking overload: Adding five or six indicators to one chart, most of which are measuring the same underlying momentum in slightly different ways, creating false confidence rather than real confirmation.

- Fighting the larger trend: Taking an RSI oversold 'buy' signal inside a strong, established weekly downtrend, rather than trading with the dominant trend.
- No stop-loss because 'the indicator said so': Treating an indicator signal as a certainty rather than a probability, and skipping risk management as a result.

□ Real-Life Analogy

Think of RSI as a car's speedometer and MACD as its tachometer. The speedometer (RSI) tells you how fast you're going right now. The tachometer (MACD) tells you whether the engine's momentum is building or fading. Neither one tells you if there's a turn coming up ahead — for that, you still need to look at the road itself, which is what price action and support & resistance are for.

8. Quick Reference — RSI vs MACD

Aspect	RSI	MACD
What it measures	Speed/size of recent price changes (0–100 scale)	Relationship between two EMAs of price
Best known for	Overbought (>70) / Oversold (<30) zones	Bullish / Bearish crossovers
Key advanced signal	Divergence between price and RSI	Divergence between price and MACD
Character	Faster, more sensitive, more short-term	Smoother, better at confirming trend
Default settings	14-period	12-period EMA, 26-period EMA, 9-period signal

9. Chapter Summary

Here is everything you learned in this guide in one concise recap:

- RSI is a 0–100 oscillator measuring the speed and size of recent price moves, with 70 and 30 marking the classic overbought and oversold zones.
- Overbought and oversold are caution flags, not automatic buy/sell signals — strong trends can keep RSI extreme for a long time.
- RSI divergence — price and RSI disagreeing on direction — is the most valuable RSI signal, but should be confirmed with price action before acting.
- MACD tracks the relationship between a 12-EMA and a 26-EMA, using a signal line and histogram to reveal momentum shifts.
- MACD crossovers near the zero line carry more weight than crossovers far away from it, and MACD divergence works the same way as RSI divergence.
- Using RSI and MACD together, and confirming with price action and support & resistance, produces far more reliable signals than using either indicator alone.

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