



THE FINANCE KNIFE

Professional Finance Toolkit

User Manual & Onboarding Guide

Field: Professional Verticals · Knife 12 of 50 · \ Offline.Ltd

9 TOOLS + FEATURES	3 ADVANCED ENGINES	 100% OFFLINE	 UPDATES INCLUDED
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This manual covers every tool, feature, and keyboard shortcut in The Finance Knife — a single HTML file containing six professional finance calculators plus Oracle Mode (reverse goal-solving), Scenario Studio (parallel comparisons with overlaid charts), Monte Carlo simulation (probability-based projections), and a global inflation engine. Everything runs offline in your browser. No data ever leaves your machine.

Version 2.0 · For use with The_Finance_Knife.html

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1. Getting Started

The Finance Knife is a single HTML file. No installation, no account, no internet connection required. Open it in any modern web browser and you are ready to work.

System Requirements

BROWSER	VERSION	NOTES
Chrome / Edge	90+	Full support, recommended
Firefox	90+	Full support
Safari	15+	Full support
Mobile (iOS/Android)	Any modern	Fully responsive, all features work
Internet Explorer	—	Not supported

Opening the Knife

Double-click `The_Finance_Knife.html` or drag it into your browser. The welcome modal appears on first launch. Click **Got it — open the knife** to begin.



PRO TIP

E-mail this HTML file to your own webmail with a memorable subject line. It will always be waiting for you on any computer. Open it, work, export your state, e-mail that back too. Your personal cloud, without the cloud.

2. Interface Overview

The knife uses a clean tab-based interface with a fixed header, scrollable content area, and a persistent footer disclaimer.

The Header

The red \ backslash is the Offline.Ltd brand mark. It appears alongside the product title **THE FINANCE KNIFE**. The right side shows the field category and knife number.

The Tab Bar

Tool tabs: **Compound Interest**, **Loan Amortiser**, **IRR / NPV**, **Currency Table**, **VAT / Tax Splitter**, **Invoice**, and **■ Studio**. System tabs: **■ Files** and **? Help**. The orange dot on the Files tab indicates unsaved changes.

Global Controls Bar

Below the tab bar sits the **Global Inflation Engine** control — a persistent inflation rate input and a toggle to show values in today's purchasing power across all tools.

Tooltips

Grey **■** circles next to field labels reveal contextual help on hover (desktop) or tap (mobile).

The Footer

A fixed disclaimer bar reminds users that calculations are for informational purposes only. Links to the full disclaimer in Help.

3. Saving & File Management

Your work is saved automatically to your browser's localStorage every time you change a value. To take your data with you, use the **Files** tab.

Exporting Your State

1. Switch to the **Files** tab.
2. Click **Export All** ↓.
3. A JSON file downloads containing the complete state of every tool.
4. Keep this file alongside your knife HTML file.

Importing State

1. Switch to the **Files** tab.
2. Click **Import All** ↑.
3. Select a previously exported JSON file.
4. All tools are restored to their saved state.



CAUTION

Importing a state file overwrites all current data in every tool. Export your current state first if you want to preserve it.

Per-Tool Export

Each tool card in the Files tab has its own **Export** ↓ and **Import** ↑ buttons for selective backup and restore.



PRO TIP

Keep different state files for different clients or projects. Name them descriptively: *ProjectAlpha_Q3.json*, *ClientBudget_2026.json*. Import the right one before each session.

4. Compound Interest Calculator

Tab: Compound Interest · Shortcut: Ctrl+1

Calculates the future value of an investment with compound interest and regular monthly contributions. Shows a year-by-year breakdown with visual growth bars.

Inputs

FIELD	DESCRIPTION
Principal	Starting investment amount
Monthly contribution	Amount added each month
Annual interest rate (%)	Nominal annual rate before compounding
Compounding frequency	How often interest compounds: annually, quarterly, monthly, or daily
Time period (years)	Investment horizon in whole years
Currency symbol	Display symbol (e.g. \$, €, £)

Outputs

FIELD	DESCRIPTION
Final Balance	Total value at end of period
Total Contributed	Principal + all monthly contributions
Total Interest	Cumulative interest earned
Interest Share	Percentage of final balance from interest
Real Value (today's \$)	Inflation-adjusted final balance (when inflation toggle is on)
Year-by-year table	Annual breakdown with stacked growth bars



PRO TIP

The "rule of 72" — divide 72 by your interest rate to estimate doubling time. At 7%, money doubles in roughly 10.3 years.

5. Loan Amortisation Calculator

Tab: Loan Amortiser · Shortcut: Ctrl+2

Calculates monthly payments for a fixed-rate loan and shows how each payment splits between principal and interest. Supports extra monthly payments to see time and interest savings.

Inputs

FIELD	DESCRIPTION
Loan amount	Total amount borrowed
Annual rate (%)	Annual interest rate
Term (years)	Loan duration
Extra monthly payment	Additional payment beyond minimum
Currency symbol	Display symbol

Outputs

FIELD	DESCRIPTION
Monthly Payment	Total monthly payment including any extra
Total Paid	Sum of all payments over loan life
Total Interest	Cumulative interest paid
Payoff Time	Actual payoff duration (years + months)
Interest Saved	Savings from extra payments vs standard schedule
Amortisation schedule	Yearly breakdown with principal-vs-interest bars



PRO TIP

Even small extra payments make a big difference. An extra £100/month on a 30-year £250,000 mortgage at 5.5% saves over £60,000 in interest and pays off the loan 5+ years early.

6. IRR / NPV Calculator

Tab: IRR / NPV · Shortcut: Ctrl+3

Calculates Net Present Value and Internal Rate of Return for a series of cash flows. NPV tells you total value in today's money; IRR tells you the effective annual return.

Inputs

FIELD	DESCRIPTION
Discount rate (%)	Required rate of return for NPV calculation
Cash flows	Series of values; period 0 is initial investment (negative), subsequent periods are returns

Outputs

FIELD	DESCRIPTION
NPV	Net Present Value at the specified discount rate
IRR	Internal Rate of Return (rate making NPV = 0)
Total Inflow	Sum of all positive cash flows
Total Outflow	Sum of all negative cash flows
Simple ROI	Basic return on investment percentage
Analysis	Plain-language interpretation of results

Uses Newton-Raphson iteration with bisection fallback for IRR solving. Warns when multiple sign changes suggest more than one IRR.

7. Currency Conversion Table

Tab: Currency Table · Shortcut: Ctrl+4

A manually-updatable offline currency conversion table with 20 major currencies. Click any rate cell to edit it. Rates are saved with your knife state.

20 Built-in Currencies

USD, EUR, GBP, JPY, CHF, CAD, AUD, CNY, INR, KRW, BRL, MXN, SEK, NOK, DKK, NZD, SGD, HKD, ZAR, TRY.



PRO TIP

Update rates at the start of each work week from your preferred source (central bank, XE, Bloomberg). Export your state file to keep a dated record of the rates you used.

8. VAT / Tax Splitter

Tab: VAT / Tax Splitter · Shortcut: Ctrl+5

Splits a tax-inclusive amount into net and tax, or adds tax to a net amount. Works with any percentage-based tax: VAT, GST, sales tax.

Inputs

FIELD	DESCRIPTION
Amount	The figure to split or add tax to
Tax rate (%)	Percentage rate
Direction	Tax-inclusive (extract) or tax-exclusive (add)

Includes a quick reference table of common VAT rates for 10 countries (UK, Germany, France, Netherlands, Spain, Italy, Japan, Australia, Canada, India).

9. Invoice Generator

Tab: Invoice · Shortcut: Ctrl+6

Creates clean, printable invoices with automatic line-total calculation, optional tax, and live preview. Use your browser's print function to save as PDF.

Inputs

FIELD	DESCRIPTION
From / Bill To	Your details and client details (multi-line)
Invoice number	Your invoice reference (e.g. INV-001)
Date / Due date	Issue date and payment deadline
Currency symbol	Display symbol
Tax rate (%)	Optional tax rate (set to 0 for no tax)
Line items	Description, quantity, and unit price per line
Notes	Payment instructions, bank details, or terms



PRO TIP

Save your company details in the state file. Next time you open the knife, your from-address, currency, and tax rate are already populated.

10. Oracle Mode

Oracle Mode reverses the calculation: instead of asking "what will I get?", you ask "what do I need?" Toggle

■ Oracle Mode in Compound Interest, Loan Amortiser, or IRR/NPV to activate it.

Oracle in Compound Interest

Set a target balance and choose what to solve for: required monthly contribution, required annual rate, or required time. The Oracle shows three paths — Conservative, Balanced, and Aggressive — each with different assumptions about contributions, rate, or timeline.

Oracle in Loan Amortiser

Set a goal: pay off in X years, or limit monthly payment to X. The Oracle calculates the required extra payment and shows three tiers of aggressiveness with interest savings for each.

Oracle in IRR / NPV

Set a target IRR and select which period's cash flow to adjust. The Oracle finds the exact cash flow value needed to achieve your target return.

The Mathematics

The Oracle uses the same Newton-Raphson iterative solver that powers the IRR calculator, with bisection fallback for guaranteed convergence. It simply inverts the equation: given a desired output, it finds the required input.

**PRO TIP**

Combine Oracle Mode with Scenario Studio. Use the Oracle to find the required monthly contribution, then fork scenarios at different levels to compare paths side-by-side.

11. Scenario Studio

Tab: ■ Studio · Shortcut: Ctrl+7

Every tool has a scenario bar at the top. Click + **Fork** to snapshot the current inputs as a named scenario (Base, Bull, Bear, Client A — whatever you choose). Switch between scenarios instantly. Then open the Studio tab to compare all scenarios side-by-side.

How It Works

1. Configure a tool with your base-case numbers.
2. Click + **Fork** in the scenario bar and name it.
3. Change the inputs and fork again with a different name.
4. Switch to the ■ **Studio** tab to see all scenarios compared in one clean table with overlaid growth curves on a canvas chart.

Comparison Dashboard

For each tool with forked scenarios, the Studio shows a comparison table highlighting the best outcome in each metric, plus an overlaid canvas chart with colour-coded lines, hover tooltips, and a legend.



PRO TIP

Use scenarios to present multiple options to a client. Fork "Conservative", "Balanced", and "Aggressive" variants, then open Studio for a presentation-ready comparison.

12. Monte Carlo Simulation

The Monte Carlo simulator in Compound Interest runs 1,000–5,000 random simulations of your investment projection, each with randomized annual returns based on your expected volatility.

Controls

FIELD	DESCRIPTION
Annual volatility (±%)	Standard deviation of annual returns (e.g. ±8% for typical stock portfolio)
Simulations	Number of random paths: 1,000 / 2,000 / 5,000
Run Simulations	Executes all paths in pure vanilla JS (typically under 1 second)

Outputs

FIELD	DESCRIPTION
Fan chart	Percentile bands (10th–90th, 25th–75th) with median line on canvas
10th / Median / 90th percentile	Key outcome values from the distribution
Mean	Average of all simulated final balances
Success probability	Percentage of paths that reach the target (Oracle target or deterministic projection)



PRO TIP

Set volatility to ±8% for a typical stock market portfolio, ±3% for bonds, or ±15% for aggressive growth stocks. A 7% average return does not mean 7% every year — Monte Carlo shows the realistic spread.

13. Global Inflation Engine

The global inflation rate slider sits above every tool in the persistent control bar. Toggle **Show values in today's dollars** to see all future values adjusted for purchasing power erosion.

How It Works

Each future value is divided by $(1 + \text{inflation})^{\text{years}}$ to convert to present-day purchasing power. The nominal values are still calculated — you see the real (inflation-adjusted) equivalent alongside them in the stat cards.

Affected Tools

TOOL	WHAT CHANGES
Compound Interest	Shows Real Value (today's \$) stat card and inflation note
Loan Amortiser	Shows Real Total Paid and real total interest
IRR / NPV	Recalculates with inflation-aware context



CAUTION

Inflation adjustment uses a constant rate assumption. Real-world inflation fluctuates. Use this as an approximation, not a guarantee.

14. Keyboard Shortcuts

Global

Ctrl + S	Export full knife state
Ctrl + H	Open Help tab
Escape	Close any modal

Tool Switching

Ctrl + 1	Compound Interest
Ctrl + 2	Loan Amortiser
Ctrl + 3	IRR / NPV
Ctrl + 4	Currency Table
Ctrl + 5	VAT / Tax Splitter
Ctrl + 6	Invoice Generator
Ctrl + 7	Scenario Studio

15. Troubleshooting

Blank page or no interactivity

JavaScript must be enabled in your browser. Check your browser's settings or security extensions. Try opening in a private/incognito window.

Data disappeared after clearing browser data

The knife stores data in localStorage. Clearing browser data, cookies, or site data will erase your saved state. Always export before clearing.

Calculations seem wrong

Verify your inputs — especially that rates are entered as percentages (7 not 0.07). Check the compounding frequency. For loans, remember the rate is annual; the tool converts to monthly internally.

Tabs overflow on mobile

The tab bar scrolls horizontally. Swipe left to reveal more tabs. The Studio and system tabs are at the far right.

Import says 'Wrong knife'

The state file's "knife" field must match "finance" exactly. You may be trying to import a state from a different Offline.Ltd knife.

Monte Carlo is slow

Try reducing simulations from 5,000 to 1,000. On older devices, 2,000 paths is a good balance of speed and accuracy.

Inflation-adjusted values not appearing

Check that the "Show values in today's dollars" checkbox is ticked in the global controls bar below the tab bar.

16. Accuracy & Limitations

TOOL	TYPICAL ACCURACY	NOTES
Compound Interest	Exact	Standard FV formula; matches any financial calculator
Loan Amortiser	Exact	Standard amortisation formula; rounding to cents may differ by $\pm\$0.01$
IRR / NPV	High	Newton-Raphson + bisection; converges to within 0.01% for standard flows
Currency Table	Manual	Rates are user-entered; accuracy depends on your source
VAT Splitter	Exact	Simple division/multiplication
Invoice	Exact	Arithmetic only; no tax jurisdiction validation
Oracle Mode	High	Same solver as IRR; results within 0.01% of target
Monte Carlo	Statistical	Random sampling; results vary between runs (by design)
Inflation Engine	Approximate	Assumes constant inflation rate; real inflation fluctuates



CAUTION

Financial calculations are provided for informational and planning purposes only. They should not be treated as a substitute for professional financial advice, accounting, or tax guidance. Always verify outputs against authoritative sources when making financial decisions.

17. Glossary

Amortisation	The process of spreading a loan into a series of fixed payments over time, each covering interest and reducing the principal balance.
Compound Interest	Interest calculated on the initial principal and on accumulated interest from previous periods.
Compounding Frequency	How often interest is added to the balance: annually, quarterly, monthly, or daily.
Deflation	In this tool: converting a future nominal value to present-day purchasing power by dividing by $(1 + \text{inflation})^{\text{years}}$.
Discount Rate	The rate of return used to discount future cash flows back to their present value. Represents opportunity cost.
Future Value (FV)	The value of an asset or investment at a specified date in the future, assuming a given rate of growth.
Gross	The total amount including tax.
Internal Rate of Return (IRR)	The discount rate that makes the Net Present Value of a series of cash flows equal to zero.
localStorage	A web browser feature that stores data locally on your device. No server is involved.
Monte Carlo Simulation	A technique that runs thousands of random scenarios to model the probability distribution of outcomes.
Net	The amount before (excluding) tax.
Net Present Value (NPV)	The sum of all future cash flows discounted back to today at a given rate. Positive NPV means the investment creates value.
Newton-Raphson Method	An iterative numerical technique for finding roots of equations, used here to solve for IRR and Oracle Mode targets.
Nominal Value	The face value of money without adjusting for inflation — what the number says, not what it can buy.
Oracle Mode	A reverse-solving feature that finds the required input to reach a specified financial goal.
Percentile	A value below which a given percentage of observations fall. The 10th percentile means 10% of outcomes were lower.
Principal	The original sum of money invested or borrowed, before interest.
Real Value	The value of money adjusted for inflation — what it can actually buy in today's terms.

Scenario	A named snapshot of all inputs in a tool, used for side-by-side comparison in the Studio.
Simple ROI	Return on investment calculated as $(\text{gains} - \text{cost}) / \text{cost} \times 100\%$.
State File	A JSON file containing the saved configuration of all tools. Used for backup, transfer, and sharing.
VAT	Value Added Tax — a consumption tax applied at each stage of production. Also called GST in some countries.
Volatility	A statistical measure of the dispersion of returns. Higher volatility means wider range of possible outcomes.

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Sharp numbers.

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