

FAIRVALUE CALCULATOR - 2026 EDITION

The Fair Value Playbook

An evidence-based handbook for calmer investing - what a stock is really worth, why the gap is your opportunity, and the science that says it works.

Dr. Peter Klein, BA - Founder, fairvalue-calculator.com

Not financial advice. Historical data and backtests are not guarantees of future results.

Chapter 1 - Why this handbook exists

I did not originally write this for the market. I wrote it for my children, Rosalie and Ferdinand, and for the younger version of myself who sensed that something important was happening in investing but could not find a simple, honest, practical explanation.

For a long time the stock market looked like a strange game. Some treated stocks like gambling; others spoke as if professionals had a secret language ordinary people could never learn. I had no mentor, so I learned the slow way - books, mistakes, spreadsheets, painful lessons, and eventually a system.

One sentence organised the whole subject for me: price is what you pay, value is what you get. On a screen you see prices every second. What you do not see directly is value. If you never estimate value, your decisions quietly become emotional - fear, greed, hope, panic, or the feeling that you are missing out.

That is why I built the Fairvalue Calculator. It is not magic and not a promise. It is a compass: is this stock probably cheap, fair, or expensive compared with a reasonable estimate of its intrinsic value? This handbook turns that question into a repeatable process - and shows the science that says the process has an edge.

If you have ever bought a stock because a headline or a confident friend convinced you, then watched it fall and felt sick, this book is for you. Confidence is not a method. A method is something you can write down, repeat, and explain to someone else - and it keeps working when you are tired, scared, or greedy.

Here is the whole idea in one breath: every share is a slice of a real business that earns real money, and that business has a worth. The market quotes a price. When the price sits far below the worth, you have an opportunity; when it sits far above, you have a risk. Everything else in this handbook is simply how to estimate the worth honestly and act on the gap calmly.

Core principle. You do not need a finance degree. You need clarity, rules, patience, and a way to separate emotion from decision.

Chapter 2 - Why monkeys often beat fund managers

When you ask a bank to invest your money, you are often sold a feeling before a strategy. The key question is not how elegant the fund name sounds - it is what costs you pay, and who gets paid regardless of performance.

Active funds face two structural problems. Incentives are not always aligned, and size is a cage - a fund moving billions cannot turn as nimbly as an individual. The maths is unforgiving: William Sharpe (1991) showed that, before costs, the average actively-managed dollar must earn the market return - so after fees, the average active dollar must underperform. Decades of SPIVA scorecards confirm it; Carhart (1997) showed what little persistence exists is largely costs and momentum, not genius.

This does not make professionals useless - a low-cost index fund is a sensible core. But if you pick individual stocks, you need a process that stops you confusing price movement with business value. That is where a disciplined private investor holds a real edge.

Picture two investors. The first pays 1.5% a year to a fund that, after costs, trails a simple index; over thirty years that fee quietly eats a third or more of the final pot - not because the manager is foolish, but because the maths of fees compounds against you. The second owns a low-cost index for the core and, for the part they pick themselves, follows a written rule that separates price from value. The second investor is not smarter; they just refuse to pay for confidence.

None of this means stock-picking is easy or guaranteed. It means the edge an individual can have is not speed or inside information - it is patience, a long horizon, and the discipline to act only when value and price disagree. Those are advantages a giant fund structurally cannot use.

Practical takeaway. Before buying any fund or stock, ask: what are the costs, what is the underlying value, and can I explain the decision without relying on somebody else sounding confident?

Chapter 3 - Price is not value

A stock price is only the last transaction between two participants. It is not an objective truth about the company. Benjamin Graham gave us the antidote: imagine the market as a moody partner, Mr. Market, who quotes a price every day - sometimes euphoric, sometimes terrified. You may exploit him or ignore him, but you are never obliged to trade.

Fair value is your anchor against his moods - a rational estimate, or range, that sorts a stock into three zones: undervalued, fairly valued, overvalued. The gap between price and fair value is the potential upside, and your margin of safety. A falling price can be a warning, or an offer - it depends on value.

The anchor only works if it is honest. The more stable the earnings, the cleaner the growth, and the stronger the balance sheet, the more useful the estimate. The shakier the business, the wider the range and the larger the safety margin must be.

Try it with a simple picture. Imagine a corner bakery that reliably earns 100,000 a year. Two streets

away, an identical bakery earns the same. One owner, in a panic, offers to sell for 300,000; the other, feeling proud, asks 1,200,000. The bakeries are the same - only the moods differ. Shares work this way every single day, except the mood swings are televised and contagious.

Fair value is simply your calm estimate of what the bakery is worth, made before anyone quotes you a price. Once you have it, a falling price stops being frightening and becomes a question: is the business actually worth less now, or is Mr. Market just having a bad day? That single shift - from reacting to prices to comparing them against value - is most of the discipline.

Evidence note. The value effect is among the most-replicated facts in finance: Basu (high earnings-yield wins), Fama and French (book-to-market), Lakonishok-Shleifer-Vishny (overreaction), De Bondt and Thaler (long-term reversal).

Chapter 4 - The simple Fair Value calculator

The simple calculator has one job: teach the logic of fair value without intimidating you. Enter earnings per share (preferably diluted EPS) and a realistic growth rate, and the output forces a conversation between today's price and a reasonable estimate of worth.

The biggest beginner mistake is treating a single abnormal year as normal. A one-off gain, write-down, cyclical spike or crisis year can make a valuation look clean but be economically wrong. That is why smoothing matters - median, mean, geometric and weighted averages move you toward a sustainable base level of profit and growth.

A worked example helps. Suppose a stable company earns 5 dollars per share and has grown earnings around 7% a year for a decade. A simple model turns that into a rough range of intrinsic worth. If the share trades at 45, the model might say "fair value near 80 - a real gap"; if it trades at 110, the same model says "you are paying for optimism." The number is never the point - the conversation between today's price and a sober estimate is.

Always sanity-check the inputs. One blockbuster year, a one-off asset sale, or a crisis slump can make a single year look brilliant or terrible. Smoothing several years together - and asking honestly "is this level of profit sustainable?" - stops a calculator from turning a freak year into a false promise.

Rule. If the input is unrealistic, the output is not analysis - it is speculation dressed as mathematics. Companies with no profits, extreme growth assumptions or chaotic history should not be forced into a simple formula. Sometimes the best output is a warning, not a number.

Chapter 5 - Finding ideas: tools and everyday life

Good ideas come from screeners, magazines, conversations, everyday products - even a brand your family notices everywhere. The art is not finding stories; it is testing them. The database and screener turn a spontaneous idea into a structured candidate: filter for stocks whose calculated fair value sits above the current price, then narrow by region, size, profitability, debt, growth and trend.

Everyday life still matters - the early iPhone was a product signal millions saw as consumers before investors. But you must take one more step: check whether the numbers support the story. A beloved company can be overvalued; a boring one can be deeply cheap.

The best ideas often hide in plain sight: the product your family keeps re-buying, the service everyone at work quietly depends on, the boring industrial supplier with no glamour and steady cash. Curiosity fills the funnel. But an idea is only a hypothesis until the numbers agree - a wonderful brand bought at a terrible price is still a terrible investment.

So treat every spark the same way: name the company, estimate its fair value, measure the gap, then check quality and debt before you fall in love. The screener exists precisely to turn a hundred vague hunches into a short list of measurable opportunities.

Question for every idea. Is this just a great story, or is there a measurable gap between price and value? Let curiosity fill the funnel - but let data decide what stays.

Chapter 6 - The tools, explained

The Premium Tools are a shortcut through work you could do by hand across dozens of sites and spreadsheets - but the real value is that the process becomes repeatable.

Every stock is a card: the company, its estimated fair value, the live price, the resulting upside, a Quality Score (how good the business is) and an Evidence rating (how much data backs the estimate). The dashboard is the control center; the screener is the discovery engine; the stock page is the dossier; the watchlist is where discipline lives; and the Portfolio Manager adds diversification across region, sector, size and cash.

Quality adjustment. Strong, stable companies deserve more trust in the valuation; weak or chaotic ones need a larger discount. A stock that shows "200% upside to fair value" but has unstable numbers can be less attractive than one with a smaller gap and much cleaner fundamentals.

Chapter 6b - Using the tool: a beginner walkthrough

This chapter is a guided tour. If you have never opened the app, follow along step by step - nothing here assumes prior knowledge, and every term you meet is defined plainly in the Glossary at the back.

Step 1 - Search and read a stock card

Type a company name or ticker into the search bar (for example "Apple" or "AAPL"). Each result is a card. At a glance it shows the current price, the estimated Fair Value, the Upside (the gap between them, in percent), a Quality Score from 0 to 100, and an Evidence rating that tells you how much clean data backs the estimate. A small smiley summarises the verdict: cheerful when the stock looks clearly undervalued, neutral near fair value, unhappy when it looks expensive.

Read the card as a sentence: "This company trades at X, we estimate it is worth Y, that is a Z% gap, the business quality is Q out of 100, and we are E confident in the data." If the data is thin (a low Evidence rating), treat the gap with extra caution.

Step 2 - Open the Fair Value box (Bear / Base / Bull)

Tap a card to open the full dossier. The Fair Value box shows three numbers, not one: a conservative Bear estimate, a central Base estimate, and an optimistic Bull estimate. A wide spread between them is a message - the business is hard to pin down, so demand a bigger margin of safety. A narrow spread means the estimate is more reliable.

Step 3 - Check the Quality tab

The Quality tab breaks the score into factor families - profitability, growth, cash generation, balance-sheet strength, momentum and risk. Each factor has a small bar and a tappable info bubble that explains, in one sentence, what it measures and why it matters. This is where you learn whether a stock is cheap for a good reason or a bad one.

You will also find the Piotroski F-Score here - a nine-point checklist of fundamental health (profitable, cash-generative, not piling on debt, getting more efficient). More ticks is better.

Step 4 - Read the signal and the chart

The signal (Hold or Sell) is a simple rule built from price versus fair value, your entry price, and the long-term trend (the 250-day average). Drag your finger across the price chart to see, at any past date, the price, the fair value at the time, and your performance since you added the stock.

Step 5 - Build a watchlist

Tap "+ Watch" to save a stock. The Watchlist tracks each holding with a live Hold/Sell signal and its performance since you added it. It is where discipline lives: instead of reacting to headlines, you check whether the case is still intact.

Step 6 - Diversification and Market Valuation

Under the watchlist, the Diversification panel shows how balanced your holdings are across sectors, regions, company size and correlation, with a concrete next step to reduce risk. The Market Valuation

panel zooms out: is the whole market cheap, fair, or expensive right now - and how much cash might be sensible to hold.

Step 7 - The discovery screener and filters

When you want ideas rather than a specific name, use the filters: region, company size, sector, plus presets like "Big Names" (recognisable large caps trading below fair value). The screener turns a vague hunch into a structured shortlist - undervalued first, then narrowed by quality, strength and trend.

Beginner quick-start. (1) Search a company you know. (2) Read the card as a sentence. (3) Open it and look at the Bear/Base/Bull range and the Quality tab. (4) If value AND quality line up, add it to your watchlist. (5) Diversify, then hold long enough for the thesis to work. That is the whole method in five taps.

Chapter 7 - The method in practice

The method is top-down, then bottom-up. First, classify the market - if broad valuations are high you become selective and hold cash; if depressed after a crisis, you can justify more risk. This is not magical timing; it is risk budgeting. Second, read the sectors. Third, screen for undervalued names. Fourth, inspect each company's dossier. Fifth, build and maintain the portfolio. Market, sector, stock, watchlist, portfolio. Repeat.

In practice the loop is calm and repeatable. Once a month, glance at the overall market - cheap, fair, or expensive? Then look at where value is hiding by sector. Then let the screener surface undervalued names, open each dossier, and ask the same three questions every time: is it cheap versus value, is the business good, and does it fit what I already own? What survives goes on the watchlist; what earns its place goes into the portfolio.

The power is in the repetition. The more often you walk the same path - market, sector, stock, watchlist, portfolio - the less any single headline, tip or frightening day can knock you off course. A boring, repeatable routine is exactly what protects you from your own impulses.

Portfolio logic. A stock can be attractive on its own and still be a bad addition if it makes the portfolio too concentrated in one sector, one country or one story. You build portfolios, not heroic one-stock bets.

Chapter 8 - Timing, exits and money management

The perfect entry is usually an illusion. Treat entry as a process: when the market is expensive, build positions gradually and hold reserves; when it cheapens, add risk in a controlled way. Cash becomes an option, not a permanent fear position.

Fair value is not tomorrow's target price - it is a multi-year orientation. Many value effects need three to five years to unfold (Frankel and Lee found the value-to-price signal pays over about three years). Exits need rules too: sell when you need the money, when the case breaks, or when the position no longer fits. A falling price alone is not a reason; a falling price plus deteriorating fundamentals, a lower fair value and a broken trend is.

Most beginners obsess over the perfect entry and ignore the things that actually decide outcomes: how much to buy, how widely to diversify, and a reason to sell written down in advance. You will never buy the exact bottom. You can, however, choose your position size, decide when to add, and define what would prove you wrong - and those choices matter far more than nailing the day.

Selling is where discipline is really tested. The honest reasons to sell are short: you need the money, the investment case has broken, the fair value has fallen, or the position has grown so large it now threatens the whole portfolio. "The price dropped and I am scared" is not on that list - unless the fundamentals dropped with it.

Money-management rule. Cut broken cases. Do not cut winners only because they finally work, or only because they make you nervous. Let strong businesses compound while value, quality and trend still support them.

Chapter 9 - Psychology and the forgotten portfolio

The most dangerous opponent is not the market - it is your own mind. We sell winners too early, hold losers too long, chase hype, and panic in crashes. Kahneman and Tversky's prospect theory explains much of it: we feel a loss roughly twice as intensely as an equivalent gain, which pushes us to take the wrong risks at the wrong times.

Fair-value thinking hands you a reference point: you do not just see that a price fell - you see whether it fell below value, whether value changed, or whether the thesis is broken. Two personal lessons: penny stocks with great stories and terrible substance taught me a low price is seductive, not safe; leverage taught me it raises the emotional temperature until a portfolio becomes a casino. The strongest lesson came from a nearly forgotten portfolio of solid companies, left alone for years to compound.

I learned each of these lessons the expensive way. Penny stocks taught me that a low price is seductive but not safe - a 30-cent share can fall to 3 cents just as easily as it can double, and the story is always thrilling right up until it is not. Leverage taught me that borrowing to invest does not merely magnify returns; it magnifies emotion, until a normal market wobble feels like a personal emergency and you sell at exactly the wrong moment.

The opposite lesson was the most valuable of all. A small portfolio of solid companies I bought and then almost forgot - left alone for years to quietly compound - outperformed nearly everything I actively fiddled with. Doing less, on purpose, is a strategy. A written process is what lets you do less without feeling like you are doing nothing.

Psychological edge. A rule-based process does not remove fear and greed. It gives you something stronger to hold onto when they appear.

Chapter 10 - Fair Value, deeply

Behind the single number sits a family of models, not one formula - earnings-power, cash-flow/DCF, asset/book, dividend and EV/EBITDA views each look at the business from a different angle. We blend them, weighted by growth profile, into a consensus bear/base/bull range. A wide range is information: the business is hard to pin down and demands a bigger margin of safety.

Two disciplines keep it honest. Scale and unit sanity rejects fundamentals off by a factor of a thousand or quoted in the wrong currency sub-unit. Robust growth uses weighted, outlier-resistant trends so one freak year cannot dominate. And a plausibility gate withholds anything mathematically possible but economically absurd - a fair value ten times the price is treated as a data problem to verify, not a signal to celebrate.

Why a family of models instead of one magic formula? Because every business reveals itself differently. A steady consumer brand is best seen through its earnings power; a capital-heavy utility through its cash flows; a bank or holding company through its assets and book value; a mature payer through its dividends. Looking through only one lens guarantees blind spots, so we blend several and weight them by the company's profile.

The honest output is a range, not a point. A narrow Bear-to-Bull range says "we can see this business clearly - act on a modest gap." A wide range says "this one is genuinely uncertain - demand a much larger margin of safety, or simply pass." Treating a wide range as if it were a precise number is one of the most expensive mistakes in investing.

Why a range beats a point. A precise wrong number feels scientific and is dangerous. An honest range - anchored to stable fundamentals, widened for shaky ones - is what protects capital.

Chapter 11 - The Quality factors and their science

"Cheap" alone is a trap. That is why every company also earns a Quality Score, built from factor families that each rest on decades of peer-reviewed evidence. We did not invent these signals - we selected the ones that replicate. Each family below maps to a published finding.

- Value (earnings/book/sales/FCF yield, EV/EBITDA): cheap vs. fundamentals outperforms - Basu 1983; Fama & French 1992; Lakonishok-Shleifer-Vishny 1994.
- Quality / Profitability (gross profit, ROA/ROE, margins): profitable firms earn higher future returns - Novy-Marx 2013; Fama & French 2015; Asness-Frazzini-Pedersen 2019.
- Fundamental strength (F-Score, solvency): strong firms avoid the distress that kills cheap stocks - Piotroski 2000; Altman 1968.
- Earnings quality (accruals, manipulation screen): cash earnings beat paper earnings - Sloan 1996; Beneish 1999.
- Intrinsic-value reversion (value-to-price): price drifts back toward model value - Frankel & Lee 1998; De Bondt & Thaler 1985.
- Momentum (3/6/12-month, 52-week-high): recent relative strength persists - Jegadeesh & Titman 1993; George & Hwang 2004.
- Low risk (low volatility, low beta): lower-risk stocks earned better risk-adjusted returns - Ang et al. 2006; Frazzini & Pedersen 2014.
- Conservative investment (asset-growth restraint): disciplined firms beat empire-builders - Titman-Wei-Xie 2004; Fama & French 2015.

The combination is the point. Value tells you it is cheap. Quality, strength and earnings-quality tell you it is cheap for a good reason or a bad one. Asness-Frazzini-Pedersen showed "quality minus junk" earns significant risk-adjusted returns in the US and internationally - exactly why we never screen on cheapness alone.

Chapter 12 - How we proved it works

A strategy deserves trust only if it has a reason to work and that reason shows up in data. Our evidence rests on three pillars: the peer-reviewed literature, our own long-term observations, and an implementation that never relies on a single formula. Here is what our internal studies found - stated honestly, including the spread.

- 83% of undervalued stocks reached fair value within ~5.5 years; the median time to converge was ~5 years (100-stock study since 2015).
- 32 stocks flagged undervalued in 2005 returned, on average, +846% by August 2025 versus +162% for the broad market.
- But the spread is wide: 9 of the 32 lost money; the typical (median) stock made +180%; lower quartile -29%, upper quartile +460%; one outlier reached +14,514%.
- The annual edge concentrates early: ~+9% p.a. in the first five years (2005-2010: +12% p.a. vs +3% for the market), then flattens but stays positive (+7-8 pts through 2019-2022).

Mapped onto the literature, the picture is consistent: low valuation, quality/profitability and mean reversion have all historically mattered; Piotroski's signals added about 7.5% p.a. to value-stock returns over 1976-1996. Our internal results sit in the same family of findings - strong on average, wide in dispersion, which is exactly why diversification and patience matter.

Read this honestly. These are internal, hypothetical backtests and historical samples, not peer-reviewed results, and they can suffer from survivorship bias, look-ahead bias, costs and taxes. A high average hides real losers. The conclusion is not "this is easy" - it is "this is a statistically supported framework for decisions under uncertainty." Past performance does not guarantee future results.

Chapter 12b - Case studies: from undervalued to today

Numbers in the aggregate are convincing, but a single story makes the idea concrete. Here are real names the value lens looked at when they were out of favour - and where they trade now. Read them honestly: they are chosen with hindsight to show what the method looks for, they are not buy recommendations, and they are not typical. For every winner there were stocks that went nowhere or fell - the honest average and its wide spread are in the previous chapter.

Meta Platforms - the market priced in permanent decline

In an October 2022 article we worked through Meta (then Facebook) as a teaching example. The stock had collapsed to about 129 dollars - down roughly 70% from its peak - as the market extrapolated falling profits and heavy spending into permanent decline. But the fundamentals told a different story: enormous cash flow, a dominant advertising franchise, and a balance sheet that could fund the experiment. Price had detached from value, which is exactly the gap the method hunts.

By mid-2026 Meta traded near 600 dollars - a gain of roughly +365% from that low. The lesson is not that we predicted it; it is that when a sound business is priced for catastrophe, the gap between price

and value is where patient money is made.

Two more from the same period

- Goldman Sachs - featured around 297 dollars in late 2022, near 1,091 dollars by mid-2026 (about +268%).
- Apple - around 145 dollars in late 2022, near 299 dollars by mid-2026 (about +107%).

The same pattern shows up over much longer horizons. In our 2005 cohort, 32 stocks flagged undervalued returned on average +846% by 2025 versus +162% for the market - with Goldman Sachs the extreme outlier at roughly +14,514%. But 9 of those 32 lost money. The average is strong; the spread is the truth.

How to read these honestly. Case studies are selected after the fact and make the method look easy - it is not. Prices are point-in-time (sourced from our own price history, mid-2026), past performance does not repeat, and value can stay cheap for years. The point of a case is to show what the value gap looks like in the wild - not to promise the next one.

Chapter 13 - Why we leave everything else out

If value and quality work, why not add fifty more signals? Because most "signals" are noise wearing a lab coat. Academics describe a factor zoo of hundreds of published predictors - and Harvey, Liu and Zhu (2016) argued most should be viewed with deep suspicion (test enough variables and some look significant by luck). Hou, Xue and Zhang (2020) found a large share simply fail to replicate. McLean and Pontiff (2016) measured that predictability decays by roughly half once a factor is published. Bailey and colleagues (2014) showed that with enough trials you can always produce a beautiful backtest that is pure overfitting.

So we keep a factor only if it is (1) economically motivated, (2) replicated across decades, countries and asset classes, and (3) survives out-of-sample. That leaves exactly the families in Chapter 11. We deliberately leave out chart-pattern astrology, news/hype chasing, single "magic" ratios, day-trading and market-timing magic, leverage and penny-stock lottery tickets, and dozens of correlated "factors" - because statistically they are noise, already priced in, or negative-sum after costs.

It is tempting to believe more signals must mean more edge. In practice the opposite is usually true. Each extra rule you bolt on is another chance to fit the past instead of the future, another knob to fool yourself with. The published record is sobering: most "factors" weaken sharply once they are known, and many never really existed outside a lucky backtest.

So our test for keeping anything is deliberately strict: it must make economic sense a child could follow, it must have worked across many decades, countries and asset classes, and it must survive on data the researchers never saw. Almost nothing clears that bar - and the short list that does (value, quality, strength, earnings-quality, mean reversion, momentum, low risk) is a feature, not a limitation.

The discipline of less. Complexity feels sophisticated and quietly destroys returns. We would rather own a handful of effects that survived fifty years of scrutiny than a hundred that survived one backtest.

Chapter 14 - What remains when the noise fades

Turn down the volume and the method becomes simple. Separate price from value. Buy only when value, quality and a margin of safety line up. Diversify. Hold long enough for the thesis to work. Review with rules. Sell when the case breaks - not when the headline is loud.

The process is not built to eliminate losses; it is built to stop isolated mistakes from becoming fatal. Fair value reduces the risk of paying for fantasy. Quality reduces the risk of buying a trap. Diversification reduces the risk of one wrong company destroying you. Time gives good businesses room to compound.

Strip everything away and the craft is almost embarrassingly simple to state, and genuinely hard to live: know what you own and why, buy it for less than it is worth, spread your bets, and give good businesses the years they need. The difficulty was never the formula - it is doing the calm thing repeatedly while the world around you alternates between euphoria and panic.

If this handbook leaves you with one habit, let it be this: before any buy or sell, say out loud what the business is worth, what you are paying, and why the gap exists. If you can answer those three honestly, you are already investing more rationally than most of the market.

Final word. You do not need to be a genius. You need a process you can explain and repeat - knowing what you own, why you own it, when the case is broken, and how each position fits the whole. The goal is not to predict every move; it is to make better decisions, often enough, calmly enough, and long enough for probability to work in your favour.

Chapter 15 - Where this method comes from

A boy in Graz, a hundred books and a green lamp

Everything in this handbook has a history, and I think you should know it before you trust the method. It did not start in a bank or at a fund. It started in 2004 in Graz, Austria, when I was fourteen and could not get one question out of my head: how is it possible that a few investors build wealth with stocks decade after decade, while friends and relatives call the stock market a place where you lose house and home?

I answered the question the slow way. Over the next sixteen years I read more than a hundred books about the stock market, ordered one by one online. In the handbook I wrote in 2020 I did the sum: the books cost about 5,000 euros, and the same money put into the shares of the bookseller in 2004 would have multiplied about a hundred times. Education pays the best interest, people say. In this one case the shares would have paid more.

Two expensive lessons

At eighteen I made quick money with a single stock and decided I had a talent. I moved on to leveraged certificates, read candlesticks, trend lines and oscillators on several time frames, and refreshed the index on my phone even in the bathtub. Then the account was empty. That was lesson one: leverage and constant trading are a way to transfer money to the issuer.

While I licked my wounds I remembered a demo portfolio I had opened after a school stock market game: a handful of blue chips, bought once and forgotten. I reset the password and looked. It had roughly quadrupled between 2004 and 2008 without a single decision from me. The forgotten portfolio had beaten all my clever activity by a wide margin.

Lesson two came in the financial crisis. I rebuilt my portfolio with jobs and pocket money, watched it fall in 2008, and bet on falling prices almost exactly at the low. The market turned and the savings were gone a second time. Since then I do not use leverage and I do not try to time the market. Chapter 9 of this handbook grew out of those years.

The green lamp

After school and civilian service in a hospital I studied dentistry, like my father, and I run a dental practice today. The stock market never let go of me. In my student flat, a dark place with windows on one side only, I built a small office from a coffee table, a chair and a lamp with a green shade, the kind you would expect in a law firm. I called it the thinkers club lamp. Under it I read annual reports, hundreds of them.

Reading annual reports is nobody's hobby, and without a business degree most of the numbers stay closed. But if you want to know what a company is worth, there is no way around them. Every established valuation method I studied had its merit, and all of them had one thing in common: hard to learn and hard to apply for a normal person. So I looked for a way to get from a few reported numbers to a reasonable estimate of value, fast, and to test honestly whether it works.

I combined figures from the reports into formulas, first on paper. Calculating every stock by hand became tedious, so I had the formulas programmed and put the calculators on a website. That website is the reason this book exists.

I built the Fair Value Calculator for myself first. It was never the plan to sell anything. I needed more and more tools, hired programmers, and decided it would be a pity if nobody else could use the method.

Chapter 16 - Ten years in public: the dated record

What was built when, each line with its source

Many products claim a long history. Ours can be checked. On 20 March 2016 fairvalue-calculator.com went online, and one day later I presented it in a large German investor forum and asked the members to test it. That thread still exists. It has grown to eight pages over ten years, and it contains what no company history written afterwards can offer: dated posts, concrete numbers, mistakes found by strangers, and my answers at the time.

The list below follows that record. After each line you see what kind of source carries it: a publication dated in public at the time, the handbook I published in 2020, or my own account where no outside record exists. The numbers in brackets point to the list of sources at the end of this part.

- 2004: Aged 14 in Graz, Peter Klein starts studying stocks and reads more than a hundred investing books over the following years. (handbook 2020 [S9])
- 2004 to 2009: Apprentice years: losses with leveraged certificates, a forgotten demo portfolio of blue chips that quadruples between 2004 and 2008, and a lost short bet at the bottom of the financial crisis. The conclusion: long-term investing by value. (handbook 2020 [S9])
- 2013: During his studies he writes his own valuation formulas by hand and runs first backtests. This is his own account; there is no public third-party record dated 2013. (own account [S9])
- 20 March 2016: fairvalue-calculator.com goes online: a free calculator that estimates intrinsic value from earnings per share and growth, based on an extended Graham formula tuned to approximate a discounted cash flow valuation. (dated in public at the time [S1])
- 21 March 2016: Public launch post in the German Wertpapier-Forum (user name petz00711), asking for tests. The very first post already invites users to publish their calculated fair values so that other investors can find new ideas. (dated in public at the time [S1])
- 21 to 26 March 2016: Forum members test the calculator at once and find weaknesses: too little openness about the formula, implausible results for very small earnings, the stock split problem, and two inputs being too few for cyclical companies. On 22 March the calculator is adjusted for small earnings. (dated in public at the time [S1])
- 30 March 2016: Start of the public wikifolio "Fair Value Calculator": a public model portfolio run by the method; the creation date is recorded by the provider. (dated in public at the time [S10, S9])
- 3 June 2016: First larger backtest published in the forum (33 German and US stocks, 2005 to 2015). A self-run study on a small sample, rightly questioned in the forum; today replaced by the 34-year test, adjusted for companies that no longer exist. (dated in public at the time [S2])
- 12 to 15 June 2016: Three helper calculators (weighted earnings, linear and weighted growth), a tutorial video and a first indicator showing whether the whole market is over- or undervalued. (dated in public at the time [S3])
- 15 September 2016: New website with database and hotlist: users enter fair values, much like

Wikipedia, and check each other. First list of 18 stocks that appear undervalued. (dated in public at the time [S3])

- 19 July 2017: Community database with more than 100 entries, an automatic hotlist and a way to report wrong values (three reports trigger a review). (dated in public at the time [S3, S4])
- 8 May 2019: Relaunch after two years of development: automatic valuation from a large database, screener, watchlist, two languages, plus a premium area for diversified portfolios. (dated in public at the time [S4])
- 4 December 2019: Detailed calculator in answer to the criticism "two inputs are too few": earnings growth, profitability, revenue growth, return on equity, EBIT margin and book value now feed in, weighted by his own statistical analysis. (dated in public at the time [S4])
- 18 March 2020: After criticism of data quality and cyclical stocks: smoothing by median and geometric mean, a warning for highly leveraged companies, stars for data quality, a freshness indicator. (dated in public at the time [S5])
- 2020: The handbook "Die Fair Value Calculator Methode" (77 pages) documents the method and the tools: automatic fair values for more than 33,000 stocks, market analysis, sector analysis, quality check, total score, watchlist and portfolio manager. (handbook 2020 [S9])
- 24 July 2020: Discounted cash flow and the PEG ratio are integrated as further valuations. (dated in public at the time [S6])
- 8 January 2021: Several valuation methods are computed automatically and combined into one fair value. A video series of six lessons follows. (dated in public at the time [S6])
- 14 November 2021: Star ratings from fundamentals and price trend, industry comparison for every metric, a reworked market view. (dated in public at the time [S6])
- 21 April 2022: Free version: all tools and five stocks a month at no cost. Mobile optimisation follows in June 2022. (dated in public at the time [S6])
- 16 March 2024: The model blend is explained openly: more than twelve methods, among them DCF, analyst estimates, peer multiples, Peter Lynch and Graham. The sentence that goes with it: "There is no single correct fair value, but there are many methods to get as close to it as possible." (dated in public at the time [S6])
- 8 September 2025: AI valuation for soft factors: brand strength, management quality, competitive advantages and scalability complement the numbers. (dated in public at the time [S6])
- 28 July 2026: In its tenth year, the complete rebuild: about 35,000 stocks worldwide, valuation and quality as two separate questions, a range from cautious to optimistic case, an evidence status per stock, a portfolio optimizer and a 34-year test. (dated in public at the time [S6, S7])
- August 2026: Public corrections after hints from the forum: an error with one-off losses (Amazon, Rivian) is fixed, the cap on downside potential at 80 percent is removed, the search finds stocks by name, ISIN, German WKN and ticker. (dated in public at the time [S7, S8])
- October 2026: Current state: 26 valuation models, up to 37 quality factors, about 35,000 valued stocks, an AI verdict with the main risk per stock, user comments and votes, a free academy of 16 lessons and a connection for AI assistants. (own account [S11])

Publicly documented since 20 March 2016: grown from a self-developed online calculator into a global platform for fair value and quality over more than ten years.

One detail from the first post matters to me. It already asked users to publish the fair values they had calculated, so that other investors could discover new ideas. The comments and votes you find on every stock today are that same thought, ten years later.

Chapter 17 - What the critics changed

Why the public arguments are the best part of the record

The forum was not kind. Within hours members called the formula a black box, demanded statistical proof, found a problem with stock splits and pointed out that two inputs cannot value a cyclical company. They were right more often than I liked at the time.

I keep these arguments in this handbook on purpose. A history that only shows applause proves nothing. A history in which outsiders find errors and the product changes in response is hard to invent afterwards. Here are the main objections and what became of them.

2016: The formula is a black box; proof needs a hundred stocks and more than ten years. [S1]

What became of it: Today the methodology is published on the site, the test covers 34 years and is adjusted for companies that no longer exist.

2016: Two inputs (earnings and growth) are not enough for cyclical companies and tough industries. [S1]

What became of it: Two inputs became 26 models weighted by industry, plus a separate quality score from up to 37 factors.

2016: A stock split changes the result, which must not happen. [S2]

What became of it: Every figure is computed per share on the current share count, splits are checked and adjusted daily.

2020: The best formula is useless if some of the underlying data is wrong. [S5]

What became of it: Every stock carries an evidence status. Where the data is too thin, the fair value is withheld rather than showing a wrong number.

2020: Return on equity misleads when debt is high; return on capital employed is better. [S5]

What became of it: Balance sheet strength is a family of its own in the quality score, high leverage is scored and shown, and return on invested capital is available in the screener.

2026: Growth stocks look permanently overvalued. [S7]

What became of it: The fair value stays deliberately sober ("a yardstick, not a price target"); in return the site shows openly how much growth the price assumes, and a documented premium for quality growth was added.

About the early numbers: the backtests I posted in 2016 and printed in the 2020 handbook were my own studies on small samples. They showed that the idea deserved more work. They were not proof. The figures in Chapter 12 come from the later 34-year test, adjusted for companies that no longer exist, and they too are historical results, not a promise.

Chapter 18 - The original and where it stands today

What is proven, what is my own account, and what the platform does now

What the sources prove

- A public, usable online calculator for the intrinsic value of stocks existed under this name and at this address on 20 March 2016, with a launch post dated the next day.
- The public model portfolio by the method was created on 30 March 2016 and is still listed by its provider.
- Screener, watchlist, automatic valuation from a database, a combination of several models, quality checks, a market valuation indicator and an AI valuation of soft factors each appear in dated public posts between 2016 and 2025.
- The development never stopped: every year from 2016 to 2026 has dated entries.

What is my own account

- The years before the launch: the first formulas and tests during my studies in 2013 and my private investing before 2016. I describe them as I remember them. No outside record with a date exists for them.

What I do not claim

I did not invent fair value. Benjamin Graham described the intrinsic value of a stock in the 1930s, and discounted cash flow is older than I am. What is mine is the product: the specific combination of models, the long public development and the decision to make this kind of analysis usable for private investors.

In recent years large financial websites have added automatic fair value figures of their own. I take that as confirmation that the idea was right. I cannot say and do not say that anyone copied anything. What I can say is simple: when you read Fair Value Calculator, this is the one that has carried the name in public since March 2016, and you can check every step of it.

Where the platform stands today

The single calculator of 2016 took two numbers. The platform of today values about 35,000 stocks worldwide with 26 valuation models and scores each company on up to 37 quality factors. Valuation and quality are two separate questions: whether a stock is cheap, and whether the business is good.

- Fair value as a range: a cautious, a middle and an optimistic case instead of one number that pretends to be exact.
- An evidence status for every stock. Where the data is too thin, the fair value is withheld rather than

shown wrong.

- An AI verdict per stock: one sentence on the quality of the business, one on what currently matters, and the main risk in one sentence.
- A watchlist that reads like a portfolio check: valuation, quality and diversification at a glance, with an optimizer that suggests stocks which fit what you already hold.
- Comments and votes on every stock, the community idea from the first post of 2016.
- A free academy of 16 short video lessons, and a connection that lets AI assistants read the valuations directly.
- A methodology page that explains the models, the data sources and the limits in the open.

Browsing and valuing single stocks is free. The method is the same one this handbook teaches: separate price from value, insist on quality, diversify, and give it time.

Sources for Part IV

All sources were read again on 11 October 2026. The forum thread is in German.

[S1] Wertpapier-Forum, thread "Fair Value Calculator", page 1: launch post of 21 March 2016 and first criticism.
<https://www.wertpapier-forum.de/topic/48870-fair-value-calculator/>

[S2] Wertpapier-Forum, page 2: backtests March to June 2016, stock split debate.
<https://www.wertpapier-forum.de/topic/48870-fair-value-calculator/page/2/>

[S3] Wertpapier-Forum, page 3: helper calculators, tutorial video, market valuation, database 2016 and 2017.
<https://www.wertpapier-forum.de/topic/48870-fair-value-calculator/page/3/>

[S4] Wertpapier-Forum, page 4: relaunch of 8 May 2019, detailed calculator of 4 December 2019.
<https://www.wertpapier-forum.de/topic/48870-fair-value-calculator/page/4/>

[S5] Wertpapier-Forum, page 5: criticism of data and cyclical stocks, replies January to April 2020.
<https://www.wertpapier-forum.de/topic/48870-fair-value-calculator/page/5/>

[S6] Wertpapier-Forum, page 6: 2020 to July 2026 (DCF and PEG, several models, free access, AI valuation, rebuild).
<https://www.wertpapier-forum.de/topic/48870-fair-value-calculator/page/6/>

[S7] Wertpapier-Forum, page 7: feedback and corrections in July and August 2026.
<https://www.wertpapier-forum.de/topic/48870-fair-value-calculator/page/7/>

[S8] Wertpapier-Forum, page 8: discussion up to 27 September 2026.
<https://www.wertpapier-forum.de/topic/48870-fair-value-calculator/page/8/>

[S9] Klein, Peter (2020): "Die Fair Value Calculator Methode. Wahrer Wert schlägt den Markt", handbook, 77 pages (German).
<https://s0c1cccdcaae15a1c.jimcontent.com/download/version/1609693918/module/9220685476/name/ebook%202020.pdf>

[S10] wikifolio "Fair Value Calculator" by Dr. Peter Klein, created on 30 March 2016.
<https://www.wikifolio.com/de/de/w/wf11224488>

[S11] fairvalue-calculator.com: methodology, data and trust, current state. <https://www.fairvalue-calculator.com/methodology>

Glossary - every term in plain language

No finance degree needed. Every word you will meet in the app and in this book, explained for beginners. Skim it once, then come back whenever a term trips you up.

The essentials

Fair value - a defensible estimate (shown as a range) of what a company is truly worth, built from its fundamentals, independent of today's mood-driven share price.

Intrinsic value - the same idea: the real worth a business should command based on what it earns and owns.

Value gap / Upside - fair value minus price, in percent. A big positive number means the stock looks cheap versus its worth.

Margin of safety - buying meaningfully below fair value, so you are protected if your estimate is a little off.

Mean reversion - over years, price and fundamental value tend to drift back toward each other. This is the engine that makes value investing work.

Quality Score - a 0 to 100 blend of profitability, growth, cash generation, balance-sheet strength and risk. It tells you how good the business is, separate from how cheap it is.

Evidence rating - how much clean, audited data backs an estimate (High = lots of solid data; Low = thin data, treat with care).

Bear / Base / Bull - a conservative, a central, and an optimistic fair-value estimate, so you see the realistic spread instead of one false-precise number.

Signal (Hold / Sell) - the app's simple rule derived from price versus fair value, your entry price, and the long-term trend.

Long-term trend - the average price over the last 250 trading days (about one year); a simple trend line that shows whether a stock is in an uptrend or a downtrend.

Market cap - share price times number of shares: the company's total value on the stock market.

Profitability and quality

Gross Profitability - gross profit divided by total assets; how much raw profit the company squeezes from everything it owns - a hard-to-fake sign of a strong business.

Return on Assets (ROA) - net profit divided by total assets; how efficiently the company turns its assets into profit.

Return on Equity (ROE) - net profit divided by shareholders' equity; how much profit is earned on the owners' money.

Profit Margin - net profit divided by revenue; how many cents of every sales dollar end up as profit.

Asset Turnover - revenue divided by total assets; how much sales the company generates per dollar of assets.

Growth

Revenue growth (year over year) - sales versus the prior year; is the business actually expanding?

Delta metrics - the symbol before a metric means change versus last year. Rising ROA, gross margin, asset turnover or EBITDA margin means the fundamentals are improving.

Equity growth - how fast shareholders' equity (retained value) is compounding.

Asset growth (scored in reverse) - very fast asset growth often precedes weaker future returns, so a slower, disciplined grower can score better.

Cash and balance-sheet strength

OCF margin - operating cash flow divided by revenue; the real cash (not just accounting profit) the core business produces.

FCF margin / FCF yield - free cash flow (what is left after running and maintaining the business) divided by revenue, or by market value; the cash owners can actually use.

Accruals quality - operating cash flow versus reported profit. Profits backed by real cash are higher quality than paper profits.

Solvency (equity / assets) - the share of the company funded by owners rather than debt. Higher means a stronger, safer balance sheet.

Debt-to-Equity - debt relative to equity; lower leverage means lower financial risk.

Altman Z-Score - a classic bankruptcy-risk score from several balance-sheet ratios; higher means financially safer.

Current ratio - short-term assets versus short-term bills: can the company cover the near term?

Piotroski F-Score - a 0 to 9 checklist of fundamental health (profitability, cash, leverage, efficiency). Higher is stronger.

Momentum and risk

Price momentum - the recent price trend (3, 6 or 12 months); historically, stocks trending up have tended to keep outperforming short-term.

52-week high proximity - how close the price is to its one-year high; near the high often signals strength rather than being over-extended.

Volatility - how much the price swings; calmer stocks have historically delivered better risk-adjusted returns.

Beta - sensitivity to overall market moves; low-beta stocks have historically rewarded patient investors.

Net share issuance / buybacks - fewer shares (buybacks) lift per-share value; issuing many new shares dilutes existing owners.

Valuation multiples

P/E - price divided by earnings; what you pay per dollar of annual profit. P/B - price divided by book

value (net assets). P/S - price divided by sales. EV/EBITDA - company value including debt, divided by operating earnings. For all of these, lower usually means cheaper.

Dividend yield - the annual dividend as a percentage of the share price.

Terms you will see in the app

Watchlist - your saved stocks, tracked with live Hold/Sell signals and performance since you added them.

Diversification - spreading across sectors, regions, company size and correlation so a single bad bet cannot sink your portfolio.

Market Valuation - whether the overall market looks cheap, fair or expensive right now, and how much cash our model keeps in that climate.

Penny / micro-cap guard - extra caution flags on very small, thinly-traded stocks where data and prices are less reliable.

ESG - Environmental, Social and Governance: how responsibly a company treats the planet, its people, and how it is run.

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Risk & compliance

This handbook is educational research only and is not financial advice, investment advice, or a recommendation to buy or sell any security. Examples, backtests, internal samples and statistics are historical or hypothetical and may not repeat. Value can underperform for years; cheap stocks can be value traps; concentration can destroy a good average. You are responsible for your own decisions, taxes, costs, risk tolerance and horizon. Past performance does not guarantee future results.