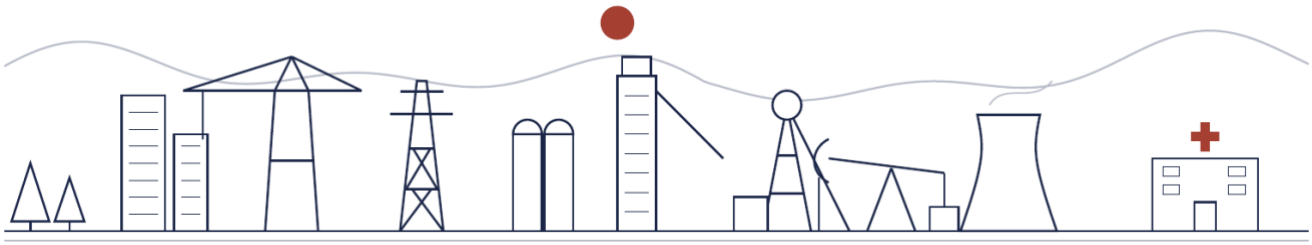
Motomeru
Strategies

BASE LAYER | METHODOLOGY

The Base Layer Methodology

A working guide to how companies are selected, valued, held, sold and measured, held loosely until the research is complete



What this is	The working guide every Base Layer release follows during 2027; it becomes the rules of record in the second edition
Prepared by	Motomeru Strategies Inc. | Jordan Hiebert, BBA, CFA, Principal
Edition	First edition, October 2026, a working guide. Second edition, January 2028
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ABOUT THIS DOCUMENT

Published first, so the starting point is on record

This guide sets out how Base Layer research intends to work, from the four tests that decide what qualifies to the benchmarks results are measured against. Its numbers are starting points. The research of 2027 will test them, every change will be dated, and the guide becomes the rules of record once every volume has been researched.

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ABOUT THIS METHODOLOGY

A working guide now, the rules of record once the research is complete

Base Layer invests in durable, needs-based businesses: the ones that own, operate, finance or allocate capital into what people need whatever the economy does, from energy, food, shelter and transport to infrastructure, defence, credit and care. This document sets out how Base Layer research intends to select, value, hold, sell and measure. It is published before the research so that the starting point is on record, and every thesis will still carry written criteria for when it would be judged wrong.

> **A WORKING GUIDE, HELD LOOSELY**
>
> This first edition is a rough guide, not yet a rulebook. The twelve releases of 2027 will test it against real companies, and the research may move a boundary, change a weight, resize a premium or show that a rule is wrong. The numbers in it, including the premiums, buffers, the cost-of-equity ceiling, leverage limits and stress-test settings, are starting points chosen from the best available evidence.
>
> The rules come into force in the second edition, in January 2028, once every volume has been researched. Until then the model portfolio still runs from inception so that the record starts on time, each release is ranked under the guide as it stands when the release is published, and every change is dated and explained in a calibration note. Results already recorded are never restated, and no rule is changed to keep a company in the portfolio.

1 | THE RESEARCH PROGRAM

Eight volumes, twelve releases, one idea

Base Layer is organized into eight volumes. Where a theme needs more room it gets a second part within its volume rather than a new number, so the series runs to twelve releases. Each release has its own thesis and coverage list. Each volume's model-portfolio holdings are ranked across all of its parts.

EXHIBIT 1

The releases

RELEASE	TITLE	ASSETS	WEIGHT	SCHEDULED
1.1	The Free General Partner	Family holding companies and insurance-based allocators	10%	January 2027
1.2	The Free General Partner, Part 2	Serial acquirers in need-based niches	With 1.1	September 2027
2.1	Rails and Relationship Banks	Emerging-market rail and network-credit incumbents	17%	March 2027
2.2	Rails and Relationship Banks, Part 2	Developed-market railways, banks and payment networks	With 2.1	October 2027
3.1	The Sovereign's Bargain	Regulated networks, water, towers, fibre and waste	9%	February 2027

RELEASE	TITLE	ASSETS	WEIGHT	SCHEDULED
3.2	The Sovereign's Bargain, Part 2	Concessions: toll roads, airports, water concessions, telecom carriers	With 3.1	December 2027
4	Sovereign Fortress	Defence, shipyards and strategic industry	10.5%	July 2027
5.1	The Homestead Portfolio	Farmland, timberland, water rights, fertilizer, grain logistics, aged spirits	20%	April 2027
5.2	The Homestead Portfolio, Part 2	Housing	With 5.1	November 2027
6	Physical Collateral	Royalty companies, low-cost metal producers, aggregates and cement	7.5%	August 2027
7	Energy Density	Low-cost producers, pipelines, nuclear	12%	June 2027
8	Human Durability	Clinics, care property, clinical and diagnostic tools	14%	May 2027

Source: Motomeru Strategies.

The master's sequence

In *The Master and His Emissary*, Iain McGilchrist describes two modes of attention: one that takes in the whole, in context, and one that analyses, categorizes and measures. Each needs the other, but the analytical mode is the better servant than master. Every Base Layer decision follows the same order, so that the rules in this guide serve judgement and never replace it.

STEP	MODE	WHAT HAPPENS	REQUIRED OUTPUT
1. Perceive	The whole	What is this business physically? Who depends on it, and would they notice if it vanished? Is the bargain with its customers fair?	At least one piece of ground truth: a site, a customer, a regulator's hearing or a conversation with management
2. Analyse	The parts	Eligibility, the valuation gate, balance sheet and layer rules, the ranking	Required return, expected return, hurdle price and spread
3. Return to judgement	The whole again	Does the analysis still describe the business seen in step 1? Moat, succession, legitimacy, and what the model leaves out	A written section headed "What the numbers cannot tell you", and kill criteria

> **THE ASYMMETRIC VETO**
>
> Judgement may exclude a company that passes every numerical test. The numbers may never admit a company that judgement has rejected. Every veto is written down with its reason and published at the next review, so the discretion can be audited too.

2 | ELIGIBILITY

Four tests decide what qualifies, applied the same way in every volume

Anything in the series must pass all four tests. Failing any one excludes a company, however attractive the price.

TEST	THE QUESTION	WHAT FAILS IT
1. Need, not taste	Does demand come from necessity rather than preference? Power, water, food, shelter, credit and care qualify	Entertainment and media royalties
2. Exists and produces cash today	Is the asset operating and generating cash now, with no option on discovery, approval or invention?	Exploration, pre-revenue biotech, venture capital
3. Has a floor	Does replacement cost, a contract or a licence set a value below which the asset is hard to push?	Large pharmaceutical companies with expiring patents; land banking and pre-construction development
4. The main risk is the bargain	Is the main risk the terms of the deal, rather than whether the thing works, is found or catches on?	Anything whose value depends on an uncertain event

What counts as a need. The first test is applied with three written criteria, so the universe stays small enough to explain. A need qualifies only if all three hold.

CRITERION	THE QUESTION
Persistence	Has the need existed across many cultures for centuries, even where the way it is met is new? Electricity and telecom are new forms of the old needs for heat, light and communication
Resilience	Did spending on it hold up through severe recessions, falling much less than output?
No escape	Do substitutes change how the need is met rather than whether it is met?

Food and drink, shelter, water, energy, transport, credit and insurance, security and industrial capacity, materials, money and care pass. Entertainment, fashion, travel and most consumer goods do not.

Three rules sit alongside the tests.

- **Inflation behaviour is measured, not promised.** Each review reports how the holdings' revenue and cash flow actually moved with inflation.
- **Geography enters through premiums, not volume boundaries.** A company belongs to a volume by what it is, not where it is. Country and currency risk are priced in the required return.
- **Price is always the last gate.** A company that passes every test is still bought only below its hurdle price.

Every holding must also be an operating business rather than a physical commodity held directly, and be run by people who think like owners, with meaningful insider ownership and a capital allocation record across a full cycle.

Where the lines are drawn

BOUNDARY	DECISION
Insurers (1.1)	Insurers run as permanent capital, in the manner of Berkshire Hathaway or Fairfax Financial, belong with the holding companies when underwriting is disciplined over a full cycle and the float is invested by an owner-minded allocator. The floor is book value with conservatively tested reserves

BOUNDARY	DECISION
Serial acquirers (1.2)	In where acquired businesses sell mission-critical products that are a small share of the customer's cost. Vertical-market software qualifies, with switching costs standing in for a physical floor. Consumer-facing roll-ups are out; pricing backlash is scored as legitimacy risk
Customer relationships (2)	Count as a real asset only when durable, recorded, enforceable and productive: customers stay for years, the platform holds history no one else sees, repayment comes from payouts, and fees are earned on little added capital
Developed railways and banks (2.2)	Volume 2 covers rails and relationship banks everywhere. The emerging-market case is its conclusion, not its boundary, and developed incumbents are the benchmark it must beat
Payment and market infrastructure (2.2)	Card networks, exchanges and clearing houses are toll roads for money and sit beside developed-market banks. Their counterparty is the regulator that caps fees
Perpetual ownership or a finite grant (3.1 and 3.2)	The line follows the contract, not the sector. A company whose right to operate ends on a fixed date, after which the asset reverts to the state or is rebid, belongs in 3.2; otherwise in 3.1. A company with both is classified by the larger share of its cash flow
Telecom (3.1)	Towers, fibre networks owned separately from retail carriers, and subsea cables belong in 3.1: owned outright, contracted, with replacement cost as the floor
Concessions (3.2)	Same thesis, adapted method: demand risk replaces the allowed return, a finite term replaces the exit multiple, and escalators replace rate cases. Includes water concessions and telecom carriers whose business rests on spectrum licences
Water (3.1, 3.2 and 5.1)	Perpetual water utilities in 3.1; water concessions in 3.2; water rights and irrigation in Volume 5
Strategic industry (4)	Grid and power equipment, industrial gases under long on-site contracts, specialty materials and qualified components, where the state is buyer, protector or funder. Manufacturing whose main risk is competition, technology or the cycle, such as cars, consumer electronics and general machinery, fails the fourth test
Alcohol (5.1)	A need, not a taste: intoxication has been part of social and ritual life in almost every culture for thousands of years; products and styles change. In: producers that own production and deep maturing stocks, and maltsters, where aged inventory sets a floor. Weaker: businesses relying mainly on brand premiums. Leverage is judged across the full cycle
Housing (5.2)	Owners and operators of rental housing, judged against replacement cost per unit and a rent the tenant can keep paying. Land banking and pre-construction development are out
Aggregates and cement (6)	Quarries and cement plants are local monopolies protected by permits and the cost of trucking stone, with permitted reserves as the floor
Life science tools (8)	Limited to clinical and diagnostic suppliers, keeping research-funding cycles out
Large technology platforms	Out of scope as holdings: their main risk is whether heavy spending on data centres and chips earns a return, and much of that capital loses its value within a few years. Tracked in every release as customers and competitors of the base layer
Data centres	Out of scope: the main risk is whether demand turns out as hoped. The series owns the theme through power, water and land

BOUNDARY	DECISION
Waste (3.1)	In: landfill owners and collection businesses operating under municipal franchises or long contracts. A permitted landfill is scarce and hard to replicate, so permitted airspace sets the floor, as permitted reserves do for quarries. The counterparty is the municipality and the permitting authority; governance risk is priced in the governance premium and, where needed, the veto
Education	Out of scope: the state is regulator, funder and competitor at once, and can end the business outright, as China did to for-profit tutoring in 2021 and US federal funding decisions did to Corinthian Colleges and ITT Tech in 2015 and 2016. There is no physical floor. Education property can still qualify where it fits: student housing in 5.2, school buildings held under concessions in 3.2

3 | THE VALUATION GATE

A price must earn more than a cost of capital that includes the counterparty

> THE CORE PRINCIPLE
>
> Capital goes where the expected return exceeds a cost of capital that fully reflects the risks, and where the assets themselves provide a margin of safety. Everything in this section makes that principle measurable.

Every position must pass three tests at the price paid: a return hurdle over a risk-adjusted cost of capital, a margin of safety suited to the type of asset, and cash flow that covers distributions through a downturn. The aim is quality at a fair price rather than the cheapest possible stock, with "fair" defined in advance and in writing.

Test 1: Return hurdle

Step A: Build a risk-adjusted cost of capital. The cost of capital is built up from a base rate plus the premiums each risk deserves, and is stated in the investor's home currency (Canadian or US dollars). First built in January 2027.

COMPONENT	WHAT IT CAPTURES
Base rate	Long-term government bond yield in the home currency
Equity or credit risk premium	The baseline premium for owning risky equity or credit
Country risk premium	Political, legal and expropriation risk where the assets or borrowers sit
Currency premium	Expected depreciation and volatility of the local currency against the home currency
Governance and liquidity premium	Weak minority-shareholder protections, controlling owners, thin trading
Counterparty premium	Whether the counterparty that matters most to the volume keeps honouring the bargain (see the table below)

Counterparty premiums. Each release prices one named counterparty. In most volumes that counterparty is ultimately the sovereign, as regulator, sole buyer, keeper of land tenure, owner of the mineral royalty or

payer for care, which makes the legitimacy premium the series' master premium. Each premium is sized for the first time in its release month, and all of them are revisited in the second edition.

RELEASE	COUNTERPARTY	PREMIUM	WHAT RAISES IT	FIRST TESTED
1.1	Controlling family; insurance regulators	Holding structure and control	Weak succession; related-party dealings; caps on premium rates	Jan 2027
1.2	Founders and acquired owners	Structure, control and succession	Discipline softening as the group grows; pricing backlash on niche monopolies	Sep 2027
2.1	Customer	Trust	Credit outside the platform's flow; weak governance	Mar 2027
2.2	Customer and regulator	Trust plus concentration	Regulators turning on the oligopoly; caps on payment fees	Oct 2027
3.1	Public and sovereign; tenant carriers; municipalities	Legitimacy	Unaffordable bills; service failures; carriers merging and cancelling leases; landfill permits refused or franchises rebid	Feb 2027
3.2	Sovereign as grantor	Renewal	Short remaining term; pressure to call the lease back	Dec 2027
4	Sovereign as buyer and protector of industry	Single buyer and industrial policy	Budget cuts; procurement backlash; tariffs and subsidies reversed	Jul 2027
5.1	Sovereign as keeper of tenure	Tenure	Export bans; insecure title; land taken by the state; harvest limits and trade duties on timber; excise, licensing and prohibition for alcohol	Apr 2027
5.2	Tenant and state	Rent control	Rent caps; expropriation votes; rents rising faster than tenant incomes	Nov 2027
6	Host state; permitting authorities	Resource nationalism	Higher royalties and taxes; forced renegotiation; quarry permits refused; carbon costs on cement	Aug 2027
7	State and substitutes	Substitution	Policy-driven substitution; nationalization	Jun 2027
8	Payer	Payer	Reimbursement cuts; operators failing under rent	May 2027

Step B: Apply the ceiling. If the risk-adjusted cost of equity exceeds the ceiling, the company is excluded, however high its expected return. Above that level, the error in any return estimate is larger than the margin it claims, so a high projected return is not evidence of a bargain. The ceiling starts at 16% in this edition, is tested against every release in 2027, and is confirmed or changed in the second edition.

Reference coverage. A company above the ceiling may still be covered as a comparable when it sharpens the analysis of its peers. It is labelled reference only, is never ranked, and cannot enter the model portfolio unless its required return falls below the ceiling.

Step C: Clear the buffer. The projected 10-year internal rate of return, under conservative assumptions, must exceed the risk-adjusted cost of capital by a buffer that rises with the uncertainty of the cash flows. The buffers below are starting points.

DURABILITY TIER	TYPICAL ASSETS	REQUIRED BUFFER	FIRST TESTED
High	Regulated utilities, towers, Class I rail, take-or-pay midstream, royalties	200 bps	Feb 2027
Medium	Holding companies, insurers, serial acquirers, waste, concessions, defence primes, strategic industry, aggregates, fertilizer, housing, care real estate	300 bps	Jan 2027
Cyclical	Commodity producers, shipping, lessors, base metals, emerging-market credit	400 bps, at mid-cycle prices	Mar and Jun 2027

Currency-adjusted returns. For any position in a Tier 2 or Tier 3 jurisdiction, or earning revenue in a currency other than the home currency, the IRR is underwritten in the home currency. Unless the exposure is hedged or revenue is priced in US dollars, the local currency is assumed to depreciate at least by the inflation gap between the two countries. A low price-to-book ratio abroad is an opportunity only if the return still clears the hurdle after that drag.

Test 2: Margin of safety

No single measure captures the downside floor of every business, so each volume uses the one that fits its assets. Where private-market evidence exists, it is used: what a private buyer would pay is often the clearest floor of all.

VOLUME	MARGIN OF SAFETY MEASURE
1. The Free General Partner	Holding companies: discount to sum-of-the-parts value. Insurers: price to book value, with reserves tested and a full-cycle combined ratio below 100%. Serial acquirers: price justified by returns on acquired capital, with switching costs as the floor
2. Rails and Relationship Banks	Hurdle price from a five-year pro forma with a stress-tested credit book; rail and logistics networks also against replacement cost
3. The Sovereign's Bargain	Networks: price to rate base relative to the allowed return. Towers and fibre: replacement cost and contracted cash flow. Waste: replacement cost of permitted landfill airspace and contracted collection cash flow. Concessions: value of the remaining term under demand-risk scenarios, with no terminal value
4. Sovereign Fortress	Free cash flow yield on contracted backlog; strategic industry also against the replacement cost of qualified capacity
5. The Homestead Portfolio	Discount to appraised land and timber value or replacement value of logistics assets; housing against replacement cost per unit and a rent the tenant can keep paying; aged spirits against maturing stock at cost plus the years needed to replace it
6. Physical Collateral	Price to net asset value at conservative metal prices; aggregates and cement against the replacement cost of permitted reserves and plants
7. Energy Density	Free cash flow yield and net asset value at prices below the futures strip
8. Human Durability	Rent coverage, and implied cap rate against private-market transactions

Test 3: Durable cash flow

Distributions and debt service must be covered by Real Sustaining Free Cash Flow in a recession scenario, not by reported earnings. Historical-cost depreciation understates what it costs to replace pipe, track, plants and fleets during inflation, so maintenance capital is restated at current replacement cost.

Real Sustaining FCF = Operating Cash Flow minus Inflation-Adjusted Maintenance Capex

A company that cannot cover inflation-adjusted maintenance capital from operating cash flow is ineligible, however cheap it looks.

Normalizing the cycle. Cyclical businesses are valued on full-cycle cash flow, never on peak trailing earnings. The lowest trailing price-to-earnings ratio in a commodity sector usually marks the top of the cycle, not a bargain.

4 | BALANCE SHEET RULES

The asset survives; leverage decides whether the shareholder does

Physical assets usually outlive a bust; the shareholders who financed them often do not. The railway manias and the fibre overbuild of the 1990s left networks that are still in use and wiped out much of the equity behind them. Leverage and debt maturities largely decide whether a shareholder gets through the bad years.

BUSINESS TYPE	LEVERAGE RULE (STARTING POINT)
Producers, industrials, defence, acquirers	Net debt to EBITDA below 2.5x
Regulated utilities, Class I rail, midstream	Investment-grade rating; leverage within regulatory and peer norms
Real estate (farmland, housing, care)	Mostly fixed-rate debt; leverage within peer norms and stress-tested for higher rates
Lenders and lessors	Adequate equity cushion, secured and match-funded liabilities, conservative collateral marks
Holding companies	Minimal debt at the holding company level
Insurers	Reserves tested against history; capital held comfortably above regulatory minimums; little debt at the parent

Maturity staggering. For every business type, no more than about a quarter of total debt may fall due in any two-year window.

Portfolio leverage cap. Across all operating companies in the model portfolio, weighted look-through debt may not exceed 50% of enterprise value. Lenders and lessors are excluded from this figure and measured instead on the weighted loan-to-value of their own loan books. Because the measure moves with market prices, a breach never forces a sale: it blocks additions that would raise it and steers the next review toward less-leveraged candidates.

Operating leverage

Fixed costs magnify profit swings just as debt does, and they are measured just as carefully. Operating leverage is accepted, and often welcomed, when the operator is competent and low-cost. It is not accepted on top of high financial leverage.

MEASURE	WHAT IT SHOWS
Cost curve position	Where the business ranks against competitors on all-in unit cost; first or second quartile is preferred
Breakeven price	The commodity or freight price at which free cash flow turns negative
Stress-price cash flow	Real Sustaining FCF at a price well below the mid-cycle assumption
Constant-price progress	Growth in reserves, volumes and FCF per share with the commodity price held fixed, which separates operator skill from price luck

5 | PORTFOLIO CONSTRUCTION

Weights follow where society's labour and capital must keep flowing

The model portfolio is fully invested. Its weights follow a map of where society's labour and capital must keep flowing for the physical economy to keep working. Each volume is weighted by the share of world output spent, over decades, on the need it serves. The map measures total resources, operating spending and capital investment together, and uses long-run averages so that it moves with demographics and the capital stock rather than with the cycle.

The weights are set in four steps. Volume 1 holds a fixed 10%, because holding companies, insurers and serial acquirers allocate capital across every need rather than serving one. The other 90% is split in proportion to each volume's long-run share. No volume may fall below 5%, or 7.5% for the two insurance volumes described below, or rise above 20%. The result is rounded to the nearest half point.

EXHIBIT 2

The resource map

VOLUME	NEED	SHARE	BASIS OF THE ESTIMATE	WEIGHT	HOLDINGS
1. The Free General Partner	Capital allocation	Not applicable	Fixed; also absorbs unfilled weight (Section 6)	10%	2 to 4
2. Rails and Relationship Banks	Moving goods and credit	About 11.5%	Freight about 7%: transport is about 58% of logistics costs, which run at 10% to 15% of world GDP. Bank lending about 4.5%	17%	4 to 6
3. The Sovereign's Bargain	Power, water and telecom networks	About 6%	Infrastructure investment about 3.5% of world GDP, plus the cost of operating the networks and waste systems	9%	2 to 3
4. Sovereign Fortress	Security and strategic industry	About 7%	World military burden about 3.5%, 1960 to 2020 average (2.3% for 1995 to 2020); strategic manufacturing about 3.5%	10.5%	3 to 4
5. The Homestead Portfolio	Food, drink and shelter	About 22%	Food and drink about 10%; housing services and construction about 12%	20% (cap)	4 to 8
6. Physical Collateral	Materials and money	About 3.5%	Metal mining, primary metals processing, aggregates and cement. Demand for metal as money is mostly a stock and barely appears in yearly spending	7.5% (floor)	2 to 3

VOLUME	NEED	SHARE	BASIS OF THE ESTIMATE	WEIGHT	HOLDINGS
7. Energy Density	Energy	About 8%	Energy spending of 8% plus or minus 2% of GDP, 1971 to 2012	12%	3 to 4
8. Human Durability	Care	About 9.5%	Health spending: 8.5% of world GDP in 2000, 9.8% in 2019	14%	3 to 5
Total		About 68%		100%	23 to 37

Sources: SIPRI Military Expenditure Database; WHO, Global Spending on Health reports; M. Grubb, I. Bashmakov et al., An Exploration of Energy Cost, Ranges, Limits and Adjustment Process (UCL Institute for Sustainable Resources, 2018), mean of 30 IEA countries; McKinsey Global Institute, Bridging Global Infrastructure Gaps (2016); J.-P. Rodrigue, The Geography of Transport Systems. Food, housing, lending, mining, building-materials and strategic-manufacturing figures are Motomeru estimates from industry and national-accounts data and are the least precise.

The floors and the cap make the result insensitive to the weakest estimates. Food and shelter reach the cap, and materials and money reach their floor, under any reasonable figures. The estimates that move the result are energy, care, networks and the freight-and-credit figure, which are also the best sourced. The map is revised every five years in a dated edition of this methodology, next in 2031, and sooner only if an estimate proves wrong by more than a third. It is never adjusted for a cycle, a price move or a forecast, and the 2027 research program does not change it.

The insurance volumes. Defence and hard money are insurance. Society spends little on them in calm years and a great deal in a crisis, through rearmament or the debasement of paper money, so an average of yearly spending shows the cost of the insurance between claims rather than the need for it. Demand for metal as money is also mostly a stock that is already held, which spending figures barely capture. Volumes 4 and 6 therefore have a floor of 7.5% rather than 5%. Volume 4 sits above its floor because it includes strategic industry. The higher floor is a judgement, stated as one, and is reviewed with the rest of the map.

Holdings. Every position sits between 2.5% and 5% of the portfolio, equally weighted within its volume. A volume's minimum number of holdings is its weight divided by 5%, rounded up; its maximum is its weight divided by 2.5%, rounded down. Each volume holds every company that passes the gate, in order of spread, up to its maximum. If fewer than the minimum qualify, the shortfall is filled under Section 6. The portfolio therefore holds between 23 and 37 companies once every volume is researched, more when bargains are plentiful and fewer when they are scarce. In a volume with two parts, candidates from both parts are ranked together.

CONSTRAINT	LIMIT
Position weight at each review	The volume's weight divided equally among its holdings; never below 2.5% or above 5%
Position weight between reviews	Left to drift; restored to target at the next review
Cash	None. The model portfolio is fully invested
Direct commodity producers	At most one per volume, and at most four across the portfolio
Volume 2 lenders beside the flow	At most one holding whose lending is mostly not repaid from the platform's own receipts
Holdings per market	Within a volume, at most two holdings earning most of their profit in the same country; portfolio-wide limits are set by the jurisdiction tiers
Portfolio leverage	Weighted look-through debt no more than 50% of enterprise value (Section 4)
Portfolio-level margin borrowing	None

The layer rule

No volume may rely on two commodity producers. Any holding after the first must own the theme through a lower-operating-leverage layer: a royalty or streaming company in Physical Collateral, a pipeline or contracted generator in Energy Density, farmland or grain logistics in the Homestead Portfolio. If the only qualifying candidate is another producer, the slot is filled under Section 6 instead.

Volume 2 applies the same logic to lending. Credit repaid from the platform's own flow, such as merchant loans collected from sales or driver loans collected from earnings, is the steadier layer. Consumer credit that the platform originates but does not collect from its own receipts is the riskier one, so at most one Volume 2 holding may lend mostly beside the flow.

> **WHERE THE DRY POWDER LIVES**
>
> The model portfolio holds no cash because the framework already owns it indirectly. The discretionary allocators in Volume 1 hold large cash reserves and deploy them in dislocations. Look-through cash is reported alongside look-through debt (Section 7).

Jurisdiction tiers

A single country cap would not suit a universe with many North American utilities, railroads and producers, so limits scale with legal and political risk instead. For miners, producers and lenders, jurisdiction means where the assets or borrowers sit, not where the company is listed. A company earning profit in several countries is allocated across them in proportion to its profit, so a Hong Kong group's mainland China earnings count toward China.

TIER	EXAMPLES	LIMIT
1: Strong rule of law, deep markets	US, Canada, UK, Western Europe, Nordics, Japan, Australia, Singapore, South Korea, Hong Kong	No single country above 50%
2: Investable, higher political risk	Mexico, Brazil, Chile, Colombia, China, Indonesia, Philippines, Vietnam, India, South Africa, Gulf states	15% per country, 35% combined
3: Frontier or high expropriation risk	Argentina, Kazakhstan, and most frontier mining, energy and credit jurisdictions	5% combined, through royalties, diversified operators or senior secured structures

6 | WHEN A VOLUME HAS NOTHING TO BUY

An empty slot is filled in a fixed order, never by lowering the bar

Capital cycles mean some volumes will be cheap while others are expensive. Because the model portfolio holds no cash, an empty slot is filled in a fixed order. At no step is a company that fails the gate bought to fill a slot.

STEP	ACTION
1. Widen the search	Look to other geographies, adjacent sub-segments and other parts of the capital structure, such as preferred shares or bonds of a company whose common equity is too expensive. The jurisdiction tiers, layer rule and cost-of-equity ceiling still apply
2. Pass the weight to Volume 1	The unfilled weight passes to the Volume 1 holdings, which allocate capital across every need and hold the framework's dry powder. Volume 1 holdings rise to 5% each; beyond that, the next-ranked qualifying Volume 1 candidates are added. Volume 1 never exceeds 25% in total
3. Use a default expression	Weight that Volume 1 cannot take is held through a low-cost fund of operating businesses in that theme, such as a broad infrastructure or royalty fund. Never physical commodities, and never a single stock that failed the gate

Calibration review. If default expressions make up more than a third of the portfolio after the build-out phase, each affected volume's hurdle is tested against history. A gate that has admitted no company through both cheap and expensive markets over several years is probably mis-specified, and is recalibrated in a dated edition of this methodology.

> **TWO LIMITS ALWAYS APPLY**
>
> The bar is not lowered to fill a slot, and no volume is filled past its weight because it happens to hold the most bargains. Volume 1 is the one exception, because it is a set of allocators rather than a need, and it is capped at 25%. Breaking the second limit is how a diversified portfolio turns into a single bet.

An unfilled volume is still published: the research sets out the watchlist and the prices at which each candidate would pass the gate.

Reviewed twice a year, and measured through the businesses it owns

The model portfolio is rules-based so that its record can be audited. It changes only at semi-annual reviews, and its strength is measured through the businesses it owns as well as through its price.

Selection and ranking

During 2027 each release is ranked under this guide as it stands on the date the release is published, and every ranking is re-run under the guide in force at each review date. Only companies that pass every eligibility, valuation and balance sheet test are ranked. Within each volume, candidates are ranked by their spread: expected return minus risk-adjusted cost of capital. Margin of safety breaks ties. Each volume holds every qualifying candidate in order of spread, up to its maximum in Section 5, subject to the layer rule and the asymmetric veto. If fewer than its minimum qualify, the shortfall is filled under Section 6. A vetoed company is skipped, the next-ranked candidate takes its place, and the reason is published at the review.

The review calendar

RULE	DETAIL
Review dates	30 June and 31 December, using closing prices on those dates; the review is published within six weeks
Between reviews	No action. Kill criteria, moat deterioration and valuation are assessed only at reviews
Challenger margin	A holding is replaced only if it fails a test, triggers a kill criterion, falls more than one rank below its volume's maximum, or a challenger's spread exceeds its own by 200 bps or more
Events that happen to the portfolio	Takeovers, mergers, delistings and bankruptcies are accepted when they occur. Proceeds are spread pro rata across the remaining holdings until the next review
Drift	Weights drift freely between reviews and are restored to target at each review

Reviews happen twice a year by design. Because nothing changes between reviews, positions are sized so that no single holding can do serious damage in the meantime: losing one holding entirely would cost the portfolio no more than 5%.

Stress test

At each review the portfolio is run through three defined scenarios. The first is a recession combined with a commodity price shock and a rise in interest rates. The second is a rate shock on its own, a 300 basis point rise in long-term rates, because Volumes 3, 5 and 8, about 43% of the portfolio, tend to fall together when rates jump. The third is physical: a severe flood, wildfire or drought in the region where the holdings' assets are most concentrated, including the loss of insurance cover there. If the estimated drawdown in any scenario exceeds 30%, the next review reduces the exposure that drives it: combined operating and financial leverage, leverage in the rate-sensitive volumes, or concentration in one hazard region. The tolerance is a design target, not a stop-loss, and never triggers selling between reviews. Historical maximum drawdowns are reported as a cross-check. Scenario settings are starting points, first run in the months shown in the 2027 Research Plan, Exhibit 2.

Look-through measurement

Each review reports the combined fundamentals of the holdings, weighted by position size, beside the portfolio's price return. When the price lags but the businesses keep compounding, the gap is visible.

METRIC	WHAT IT SHOWS
Look-through Real Sustaining FCF yield	Cash generated by the holdings, after maintaining their assets, relative to price
Weighted spread over hurdle	How far expected returns exceed risk-adjusted costs of capital
Constant-price FCF per share growth	Value created by the businesses with commodity prices held fixed
Look-through debt to enterprise value	Financial leverage of the operating holdings, against the 50% cap
Look-through cash	Cash held inside the holdings, chiefly by the Volume 1 allocators
Combined operating and financial leverage	Reported by layer: asset owners, operators and lenders
Inflation pass-through	How the holdings' revenue and cash flow actually moved with inflation, measured rather than assumed
Physical climate exposure	Share of look-through assets in high-hazard regions, and whether they can still be insured
Listed-versus-private discount	Where measurable, the holdings' implied cap rates and asset values against private-market transactions
Big-tech dependence	Share of the holdings' revenue that comes from the largest technology companies, and where those companies compete with the holdings
Counterparty signals	The indicators behind each counterparty premium, such as bill affordability, rent caps, royalty changes and reimbursement rates

The build-out phase

The model portfolio starts before any release is published, because a track record cannot be created after the fact. At inception every volume holds its placeholder: a low-cost fund of operating businesses in that theme, exactly as Section 6 treats a volume with nothing that qualifies. This starting point, the inception portfolio, is also one of the benchmarks in Section 10. Because Volume 1 is held in a global equity fund until its research is published, about a tenth of the inception portfolio is broad equities rather than real assets. Each volume replaces its placeholder with companies at the first review after its first release is published.

RULE	DETAIL
Inception	31 December 2026, at closing prices, with the portfolio set to 100 and every volume held in its placeholder at its resource-map weight
Published volumes	Hold their top-ranked companies from the first review at least ten days after publication, subject to every rule in Sections 2 to 7. A second part adds its candidates to the ranking at the first review after it is published
Unpublished volumes	Hold their placeholder fund at the volume's full weight
Entry timing	Companies enter only on review dates, never on publication dates, so no entry benefits from hindsight
Volume scorecard	Each volume's companies are compared with its own placeholder from the date they enter: did the research beat simply buying the theme?

Placeholder allocations

The placeholders below are listed only to make the model portfolio measurable while research is in progress. They are not recommendations, and several fit their volume imperfectly; the gaps are noted so readers can judge them. The funds for Volumes 1 and 2 are named and published before inception, and every placeholder's fee and holdings are re-checked at that date.

VOLUME	WEIGHT	PLACEHOLDER UNTIL THE FIRST REVIEW AFTER PUBLICATION	FIT
1. The Free General Partner	10%	A low-cost global all-country equity index fund; named before inception	Deliberate: the allocators must beat the market they allocate across
2. Rails and Relationship Banks	17%	Half an emerging-markets financials fund and half a global transport or railway fund; named before inception	Partial: no single fund combines networks and relationship lenders
3. The Sovereign's Bargain	9%	iShares Global Utilities ETF (JXI); MER 0.37%	Partial: regulated utilities in the US and Europe; little water, and no towers, fibre or concessions
4. Sovereign Fortress	10.5%	iShares U.S. Aerospace & Defense ETF (ITA); MER 0.37%	Partial: US only, heavy in commercial aerospace, and no strategic industry beyond defence
5. The Homestead Portfolio	20%	iShares Global Agriculture Index ETF (COW, TSX); MER 0.71%	Partial: inputs, equipment and grain handlers; no farmland owners or housing
6. Physical Collateral	7.5%	VanEck Gold Miners ETF (GDX); MER 0.51%	Partial: mostly gold producers; royalty companies about a tenth; no industrial metals
7. Energy Density	12%	Alerian Energy Infrastructure ETF (ENFR); MER 0.35%	Good: pipelines and storage, the lower-leverage layer
8. Human Durability	14%	iShares U.S. Healthcare Providers ETF (IHF); MER 0.37%	Weak: dominated by health insurers rather than care property, clinics and diagnostics

Fund details as published by the providers: JXI and ITA via ETF Database; COW, BlackRock Canada Fund Facts (June 2026); GDX, VanEck fact sheet (September 2026); ENFR, ETF Research Center; IHF, StockAnalysis. Checked October 2026; fees and holdings change.

The publication schedule and the review at which each release enters the model are set out in the 2027 Research Plan, Exhibit 2. By the 30 June 2027 review, six volumes carrying 82% of the weight can hold companies; by 31 December 2027, all eight.

The Spread Map

At each review, every company that has passed screening in a published release is recorded in the Spread Map, whether or not it was shortlisted or held: its required return, its expected IRR (as a range at first pass, a point estimate after a deep dive), its spread, and its implied counterparty premium. The implied counterparty premium is the premium at which the company's spread would be zero. It equals the assigned premium plus the spread divided by the equity weight. The gap between implied and assigned premiums shows how much more, or less, bargain risk the price compensates for than the record suggests.

The map is published by volume, by jurisdiction tier and by counterparty, with each measure compared against every previous review. All readings at a review are re-run under the guide then in force, so the map is comparable within a review; changes to the guide are noted where they move it between reviews. From 2028 the map also reports realized returns against the returns it implied, which shows how much of each reading came from the market and how much from the analyst's forecasts.

Recording the results

- **Hypothetical.** The model portfolio is labelled hypothetical every time it is shown. It reflects no actual trades.
- **Total return.** Dividends are reinvested, net of withholding tax at Canadian treaty rates, with an assumed trading cost of 0.2% on each change.
- **Currency.** Results are reported in Canadian dollars, with US dollars alongside.
- **Dated record.** Holdings are published, with the date and prices, within six weeks of every review. That public record is what makes the track record credible.

8 | REGIME EXPOSURE

Most volumes are built for inflation and scarcity, and the method says so

The eight volumes do not diversify across all economic environments equally. Most of them have tended to do better with inflation, supply constraints or both, and the framework is likely to be weakest in a long stretch of disinflationary growth led by asset-light technology, as in the 2010s. Exhibit 3 shows where each volume tends to sit. These are tendencies, not promises: inflation behaviour is measured at every review rather than assumed, and individual companies can behave differently from their volume. Interest rate sensitivity is tracked separately, because utilities, housing, farmland and care property in Volumes 3, 5 and 8 tend to fall together when rates rise.

EXHIBIT 3

Where each volume tends to do best

Growth runs from weak (left) to strong (right); inflation from high (top) to low (bottom)

Stagflation Physical Collateral: royalties, precious-metal producers Energy Density Homestead: farmland, water	**Inflationary boom** Energy Density Physical Collateral: base-metal producers Rails and Relationship Banks Homestead: fertilizer, grain
Deflationary bust The Sovereign's Bargain Human Durability Free General Partner: discretionary allocators	**Disinflationary growth** Free General Partner: serial acquirers Most other volumes lag here The 2010s pattern

Source: Motomeru Strategies. Placements are tendencies, not rules. Sovereign Fortress sits outside the grid: defence budgets and industrial policy, more than the cycle, drive its demand.

9 | SELLING DISCIPLINE

Sales happen only at reviews, and only for written reasons

Before any position is opened, its kill criteria are written down: the specific developments that would prove the thesis wrong. Sales happen only at semi-annual reviews. A position is sold at a review when any of the following has occurred:

- A kill criterion is triggered.
- The moat deteriorates, through regulation, competition, technology or management.
- The price moves well above a conservative estimate of intrinsic value.
- A challenger in the same volume beats its spread by the 200 bps challenger margin.

A falling price alone is not a reason to sell, but it does prompt a fresh look at the thesis at the next review. If the thesis still holds, the position goes back to its target weight.

10 | ACCOUNTABILITY

Results are reported against what you could have bought instead, including cheap factor funds

- **Four benchmarks.** Results are reported against a global equity index, the realistic alternative for most investors; against the inception portfolio of placeholder funds at resource-map weights, a blended benchmark that shows whether selection added value within the themes (a global equity fund stands in for Volume 1, so about a tenth of it is broad equities); against a factor-matched portfolio of low-cost funds, which shows whether it added anything alternative beta would not; and, volume by volume,

against each volume's own placeholder. A published real-assets index is reported alongside as a cross-check.

- **A real-return objective.** Separately from the benchmarks, results are compared with Canadian CPI plus 4% a year over rolling ten-year periods: roughly the real return a perpetual pool must earn to spend from its capital without eroding it. It is an objective, not a promise, set in this edition and reviewed in the second.
- **Review cadence.** Every thesis is revisited at each semi-annual review against its kill criteria. Results and look-through metrics are reported each review, over one-year, rolling three-year and rolling five-year periods as they become available.
- **Factor attribution.** Each year, the model portfolio's return is broken into the part explained by well-known factors and sector exposures, and the part that remains. Only what remains is credited to selection.
- **Spread Map.** Published at every review from 30 June 2027, as set out in Section 7.
- **Process scorecard.** During the 2027 build-out, the process measures in the 2027 Research Plan, Exhibit 6 are reported at each review.
- **Holdings disclosure.** Any personal position in a company discussed in the research is disclosed in that piece.
- **Corrections.** Material errors are corrected in the original piece with a dated note, and mistakes in judgement are discussed in the annual review.
- **Rule changes.** Changes to this methodology are made in dated calibration notes and editions, so past research can be judged against the rules in force at the time.

Factor attribution

Base Layer is rules-based in structure and judgement-based in its inputs, so part of its return will come from exposures that can be bought cheaply in factor funds, often called alternative or smart beta. Attribution separates the two, so readers can see whether the research adds anything a low-cost fund would not.

EXPOSURE	WHY THE PORTFOLIO IS LIKELY TO CARRY IT	MEASURED AGAINST
Value	Buys below hurdle prices, net asset value and replacement cost	Global value factor
Quality and profitability	Real Sustaining FCF test and moat requirement	Global profitability factor
Conservative investment and low leverage	Balance sheet and leverage rules	Global investment factor
Low volatility	Utilities, holding companies and contracted cash flows	Global minimum-volatility factor
Momentum	Likely negative: the method buys what is out of favour	Global momentum factor
Sector and inflation	Energy, materials, industrials, utilities and real estate	Matching sector indices and inflation-linked bonds
Region	Tilt away from US large caps	Global ex-US equity index

Results are reported as a regression of monthly excess returns on these exposures over rolling five-year windows, using published factor data. The intercept, the return not explained by any exposure, is the measure of selection skill. The first full five-year window closes on 31 December 2031.

> **WHY THIS MATTERS**
>
> Factors go through long droughts; value trailed growth for much of 2007 to 2020. A factor-heavy portfolio can look brilliant or broken for years for reasons unrelated to stock selection. Attribution shows when that is happening, in either direction.

11 | GLOSSARY

Terms used in Base Layer research

TERM	MEANING
All-in sustaining cost (AISC)	The full cost to produce an ounce of metal, including sustaining capital and overhead
Allowed return on equity	The return a regulator permits a utility to earn on its equity-financed rate base
Alternative beta	Factor exposure packaged in low-cost, rules-based funds; also called smart beta
Asymmetric veto	Judgement can exclude a company that passes the numbers; the numbers can never admit one judgement rejects
Build-out phase	The 2027 research program, when placeholders hold volumes not yet researched
Calibration note	A dated note published with each release recording any change to the rules, effective at the next review
Challenger margin	The amount, 200 bps, by which a candidate's spread must exceed a holding's before it replaces it
Cost of capital ceiling	The risk-adjusted cost of equity above which a company is excluded, whatever its expected return
Counterparty premium	The part of the required return that prices whether a volume's key counterparty keeps honouring the bargain
Country risk premium	Extra return required for political, legal and expropriation risk in a jurisdiction
Default expression	A low-cost fund of operating businesses that holds a volume's weight when no single company qualifies
Factor	A broad, persistent source of return linked to a characteristic such as value, quality or momentum
Factor attribution	Splitting a portfolio's return into the part explained by factor and sector exposures, and the part that remains
Ground truth	Something seen or heard directly, rather than read in a model or a filing
Implied counterparty premium	The counterparty premium at which a company's spread would be zero; assigned premium plus spread divided by equity weight
Inception portfolio	The eight placeholder funds at resource-map weights, as held on 31 December 2026; also a benchmark
Insurance volumes	Volumes 4 and 6, given a 7.5% floor because average spending understates the need for defence and hard money

TERM	MEANING
Internal rate of return (IRR)	The annualized return implied by a projected stream of cash flows and the price paid today
Kill criteria	Pre-written conditions that would prove a thesis wrong and trigger a sale
Legitimacy premium	The counterparty premium for the public and the sovereign; the series' master premium
Loan-to-value (LTV)	Loan balance as a share of the collateral's value
Look-through metrics	The combined fundamentals of the holdings, weighted by position size
Master's sequence	The order of every decision: perceive the whole, analyse the parts, return to judgement
Need test	The three written criteria behind the first eligibility test: persistence, resilience and no escape
Operating leverage	High fixed costs that make profits swing more than revenue; measured by cost curve position and breakeven price
Operating ratio	A railroad's operating expenses as a share of revenue; lower is better
Placeholder	A low-cost theme fund that holds a volume's weight until its research is published
Process scorecard	The measures of whether the 2027 program was carried out as promised
Rate base	The capital a regulated utility is allowed to earn a return on
Real Sustaining FCF	Operating cash flow minus maintenance capital restated at current replacement cost
Real-return objective	Canadian CPI plus 4% a year over rolling ten-year periods
Reference coverage	A company covered as a comparable but above the cost-of-equity ceiling; never ranked or held
Release	One published part of a volume, such as 3.1 or 3.2
Replacement cost	What it would cost today to build an equivalent asset from scratch
Resource map	The volume weights: each volume's long-run share of world output, with Volume 1 fixed at 10%, a 5% floor (7.5% for Volumes 4 and 6) and a 20% cap
Royalty or stream	A right to a share of a mine's revenue or output, without bearing its operating costs
Spread	Expected return minus risk-adjusted cost of capital; the basis for ranking
Spread Map	The record of every screened company's spread and implied counterparty premium, published by volume, jurisdiction tier and counterparty at each review
Take-or-pay	A contract in which the customer pays for capacity whether or not it uses it

TERM	MEANING
WACC	Weighted average cost of capital: the blended return required by a company's lenders and shareholders
Working guide	This first edition: its numbers are starting points, tested by the 2027 research before they come into force in the second edition

EDITION RECORD

Every change, dated, so the research can be judged by the guide of its time

DATE	EDITION OR NOTE	WHAT CHANGED
October 2026	First edition	A working guide, published before any of the research, alongside the thesis and the 2027 Research Plan
By 15 December 2026	Pre-inception note	Names the placeholder funds for Volumes 1 and 2 and re-checks every placeholder's fee and holdings
January to December 2027	Monthly calibration notes	One per release, logged here as published; each effective at the next review date
January 2028	Second edition	The rules come into force: consolidates the 2027 calibration notes, confirms or changes every starting parameter, and explains each change

ABOUT MOTOMERU STRATEGIES

Motomeru Strategies Inc. publishes independent, reader-funded research on businesses that own, operate, finance or allocate capital into the physical foundations of the economy. The Base Layer series is organized into eight research volumes and twelve releases, published monthly through 2027. The thesis sets out the idea, the 2027 Research Plan sets out how it will be tested, and the Methodology sets out the working guide that becomes the rules of record once the research is complete.

THE BASE LAYER DOCUMENTS

DOCUMENT	WHAT IT COVERS
Own What the World Can't Live Without	The thesis: why own the physical foundations of the economy, and what decides whether owners do well
The 2027 Research Plan	The twelve releases, month by month, and how the year will be measured
The Base Layer Methodology (this document)	The working guide to selection, valuation, portfolio construction, selling and accountability

IMPORTANT DISCLOSURES

Read these before relying on anything in this document

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Model portfolio

The Base Layer model portfolio is hypothetical and fully invested for measurement purposes. It reflects no actual trades. Individual and institutional investors may reasonably hold cash or other assets for their own needs. Placeholder funds are used for measurement only and are not recommendations. The real-return objective is a yardstick, not a promise or a projection. Volume illustrations are design artwork.

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