GLOBAL FINANCIAL ENGINEERING, INC.

The Instruments of a Charter

The Machine States · Paper VII · Instrumentation

Document GFE-PUB-MST-20261119-E · Dr. Glen Brown · Public Doctrine Series · 19 November 2026

ABOUT THIS SERIES

The Machine States is a sub-series of the Public Doctrine Series. It sets out how the houses charter a trading machine, name the conditions of its book, and govern when income may leave it. It describes internal doctrine applied to the houses' own capital. The case in Section VII is an illustration built from operating data. Its figures have been altered and it reports no account's results.

I. A doctrine must be measured to be kept

Six papers have set out the states of a trading book, the law by which part of its harvest may leave, and the charter that names what each book is for. None of it governs anything until the machine itself can read it. A state that must be worked out by hand once a week is a report. A state the machine reads on every pass is an instrument. This paper sets out what a machine needs in order to keep the doctrine: what it must record, what it must distinguish, and what it must show.

One principle governs every instrument in this paper. Each is evidence only. None admits, sizes, closes or moves anything. Paper I held that a state confers no authority over any position, and the instruments that read the states inherit that limit exactly. Their purpose is that the people who govern the machine, and the machine's own record, should know at every moment where the book stands.

II. The charter in the machine

The charter of Paper VI has four entries, and the machine must hold each. Its capital law it already holds, because the commitment ceiling is how it sizes. Its aim is a single setting. Its distribution law follows from the aim. The difficult entry is the first, Chartered Capital, and the difficulty is not where one would expect.

A trading account records every capital movement: each deposit, each withdrawal, each credit. From that record a machine can compute its net deposits exactly. But net deposits are not Chartered Capital. A withdrawal can be one of two different things. It may be a return of capital, which reduces what the book was given, or it may be a distribution of harvest under the law of Paper V, which leaves the capital exactly where it was. The account records both as the same kind of entry. Only the doctrine can tell them apart.

$$K = \text{capital deposited} - \text{capital returned} \qquad \text{(distributions are not capital returned)}$$

III. The error that accelerates

The consequence of confusing the two is not a small inaccuracy. It is an error that feeds itself, and it deserves to be shown in full because it is the reason this paper exists.

Suppose a machine treats a distribution as a return of capital. The balance falls by the amount paid, and so does its record of capital, so the Retained Harvest it computes, balance less capital, does not change at all. But the harvest that Immortality requires is a fixed share of capital, and the capital has apparently shrunk. The machine therefore reads a higher multiple than the book truly has. Under the Surplus Share Rule a higher multiple licenses a larger share, so the next distribution is larger, which shrinks the recorded capital further and raises the multiple again. Every payment enlarges the next.

Table 1. The same book read two ways

Month	Multiple read correctly	Share paid	Multiple read with distributions as capital	Share paid	Capital recorded
1	4.20	28.6%	4.20	28.6%	96.6
3	4.70	36.2%	5.34	43.8%	86.9
6	5.36	44.0%	8.10	63.0%	66.5
12	6.47	53.6%	42.57	93.0%	8.0

Illustrative arithmetic: a book of 100 units at a ceiling of one quarter, a multiple of 4.2 and a steady harvest of 12 units a month. The two columns follow the same rule; only the record of capital differs.

After a year the misreading machine believes its multiple is above forty and that it may pay out nine-tenths of every month's harvest. The book's true multiple at that point is under six. Nothing in the trading has gone wrong. The record of capital has. The first instrument of the doctrine is therefore a classification: every withdrawal must be recorded as a distribution or as a return of capital, by a rule written in advance and not by the judgement of the moment.

IV. The rule of classification

The rule follows from Paper V. A withdrawal is a distribution only if three conditions hold at the time it is made: the book is chartered to the Distribution State; its multiple stood at three or above at the start of the period whose harvest is being paid; and the amount does not exceed what the Surplus Share Rule made distributable from that period and has not already been paid. Any withdrawal that fails any of the three is a return of capital. It reduces Chartered Capital, it is recorded as a charter event, and it is named as such in the machine's record. A distributable amount that is not taken within the following period lapses into the retained harvest; entitlement does not accumulate.

The rule keys on money and on state, never on intention. Someone who wishes to take more than the law allows may do so, because the capital belongs to its owners. But the machine will record the excess as capital returned, and the book's states will be measured against the smaller capital from that moment on. The doctrine does not forbid the act. It forbids describing it as something it is not.

V. The state line

With Chartered Capital recorded correctly, the states can be read on every pass from quantities the machine already has: its balance and equity, the floor of Paper III, and the ceiling of its capital law. The state line shows them together: the state the book is in, its Immortality Multiple and Immunity Ratio, and the distance to each higher state in days of its own net banking. Each change of state is written to the record with its time, so that the history of a book's standing can be read afterwards as precisely as its trades.

The state line carries a test inside it. Paper IV showed that a book in Immortality must also be in Immunity, provided its risk at the stops never exceeds its ceiling. The line therefore reports the conditions independently. A book that reads as immortal but not immune is not in a strange state. It has a defect: risk has been admitted beyond the ceiling, or a position carries no stop. The line names that contradiction as an error. An instrument that can detect its own inconsistencies is worth more than one that only reports.

VI. The distribution ledger and the floor test

Two records complete the set. The distribution ledger writes, for each period, the multiple at its start, its net realised harvest, the share the law allowed, the amount made distributable, the amount actually paid and the amount that lapsed. Every withdrawal deal appears in it once, with its classification and the condition that decided it. A book's distributions can then be audited against its law line by line.

The floor test is the instrument of Paper III. That paper proposed that in ordinary trading the floor can fall only through a new position, a carrying cost, a fill beyond a stop or a withdrawal. A machine can test that proposition continuously. It attributes every change in its floor to the events of the pass that produced it and reports whatever cannot be attributed. A residual that persists is either a defect in the machine or a falsification of the paper, and either is worth knowing at once.

Table 2. The instruments of the doctrine

Instrument	What it records	What it decides
Charter	Chartered Capital, capital law, aim, distribution law	Nothing
Capital classification	Every withdrawal as a distribution or a return of capital	Only the record of capital
State line	State, multiple, ratio, distances, contradictions	Nothing
Distribution ledger	Per period: what the law allowed, what was paid, what lapsed	Nothing
Floor test	Every change in the floor, attributed to its cause	Nothing

VII. The Case

The following case is an illustration built from operating data. The figures have been altered and it reports no account's results.

A machine already keeps a full register of its capital movements. It detects each deposit and withdrawal and adjusts the base on which its tiers are measured. It also excludes a same-day capital movement from the base of its drawdown circuit whenever positions are open, so that a deposit cannot dilute a loss already being carried. What it lacks is the distinction this paper turns on. Its record of capital is its net deposits, and every withdrawal reduces that record.

Were such a machine to make distributions under the law of Paper V without the classification of Section IV, Table 1 is what would follow: within a year its own reading of its standing would be wrong by a factor of seven. The repair is small in code, because the movements are already detected. It is large in consequence, because it is the difference between a law that protects the capital and a law that quietly spends it.

VIII. What would falsify this reading

The design set out here would be shown wrong if a book whose withdrawals were all classified by the rule were nonetheless found to have paid out of its capital; the classification would then be incomplete. It would be wrong if the state line reported a book as immortal and not immune without a defect being found behind the report. And the floor test would fail its purpose if it left residuals that no defect, gap or cost explained. Each is a claim about a record that the machine itself keeps, and each can be checked against it.

With this paper the series is complete. It has named the states a trading book can hold, shown how they are ordered and measured, written the law by which harvest may leave, chartered each book to a state, and specified the instruments that keep the doctrine honest. A machine built this way can say at any moment what it is for, how far it stands from it and what it may pay, and it never needs a forecast to do so.

RELATED IN THE PUBLIC DOCTRINE SERIES

A Machine With a Charter: The Machine States, Paper I, which defines the states and the Immortality Multiple.

The Floor Beneath the Book: The Machine States, Paper III, whose floor ratchet the floor test checks.

The Share That May Leave: The Machine States, Paper V, on the Surplus Share Rule.

The Charter Names a State: The Machine States, Paper VI, on the aims of a node.

ABOUT THE AUTHOR

Dr. Glen Brown is President & CEO of Global Financial Engineering, Inc. and Global Accountancy Institute, Inc. He is the architect of the GCPIAUT framework and the broader GATS-native proprietary capital doctrine. His work focuses on sovereign capital governance, algorithmic trading architecture, reserve-first compounding systems, and institutional financial engineering within closed proprietary environments.

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