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MD115 and the Onshore Commission Ban: A System Dynamics Model of Provider Viability

How two simultaneous policies bend the twelve-quarter trajectory of a private Australian higher-education provider

Andrew Flitman

iMORSE

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Executive Summary

This report describes a system dynamics model of a private Australian higher-education provider facing two policies at once. The first is Ministerial Direction 115, which ties offshore student-visa processing speed to how far a provider has used its National Overseas Student Capacity allocation. The second is the onshore ban on agent commissions for student transfers between Australian providers.

The model is archetypal. It is calibrated to representative sector values, not to one provider's books, so the levels are illustrative and the policy mechanics are firm. It is built to teach the dynamics and to support board-level scenario work.

The central finding is that the damage is not in either policy alone. It is in the feedback they trigger. A short processing slowdown drains agent confidence quickly, and confidence rebuilds slowly, so a brief throttle leaves a lasting commencement slump. The two recruitment channels share one allocation, so chasing offshore demand into a binding cap raises utilisation, trips the throttle harder, and barely adds students. Cash is a gate, not a scoreboard: once reserves go, recruitment is starved and a gentle decline becomes a death spiral.

The model is validated. The Python reference and the dashboard engine agree to machine precision, every physical stock stays non-negative, the regulatory throttle moves in the direction the directive specifies, and the model reproduces the reference-mode shapes. It exports faithfully to portable XMILE. The next step for any provider is to recalibrate it to that provider's own enrolment and financial records.

1 Introduction

The intent of this report is to explain what the model does, how it is built, what evidence informed it, and what it was validated against. It is written for an academic reader and for a governance audience that wants the argument, not the equations. It is not a technical manual. The formulation and the full component reference travel with the model as separate documents.

The model sits in the system dynamics tradition. Forrester set it out at MIT in the early 1960s. Sterman codified the modern practice. The method earns its place when a problem is about behaviour over time, driven by accumulations and feedback, with delays. The MD115 and commission-ban problem is exactly that kind of problem.

2 The Problem

From late 2025 two policies began to act on private providers together. Ministerial Direction 115 commenced on 14 November 2025. It sorts offshore Subclass 500 visa applications into three lanes by how far a provider has used its indicative allocation under the 2026 National Planning Level, which was set at 295,000 new overseas student commencements. A provider below 80% of its allocation is Priority 1 and is processed fastest. Between 80% and 115% it drops to Priority 2. Above 115% it falls to the slow lane.

The second policy is the onshore commission ban. From 31 March 2026 a provider may not pay an agent a commission for an onshore transfer, that is, a student moving to it from another Australian provider after starting and before finishing a principal course. The aim is to stop course-hopping.

The two policies interact through a shared resource. An onshore transfer-in counts as a new commencement against the receiving provider's allocation, so both the offshore channel and the transfer channel draw on the one cap. Only the offshore channel is throttled by the directive. That asymmetry is the heart of the problem.

This is a dynamic problem. Students accumulate in a pipeline and in enrolment. Agent confidence accumulates and decays. Cash accumulates and drains. Processing speed feeds back onto the very confidence that drives applications. A directive that looks like a simple speed limit becomes, through these accumulations and loops, a question about survival.

3 How the Model Sees the System

The model is built from seven feedback loops. Three are reinforcing and four are balancing. Their interplay is what makes the situation complex.

The first reinforcing loop is the agent-confidence flywheel. Confidence lifts recruitment effort, which builds the applications pipeline and, once visas are granted, commencements. Arriving students lift enrolment and the provider's reputation, which restores confidence. The loop runs both ways. It is the engine of growth and, in reverse, of decline. Its confidence link is asymmetric: it drains fast and rebuilds slowly, so the loop overshoots downward and recovers sluggishly.

The second reinforcing loop is the cash-funded recruitment spiral. Enrolment generates tuition, which builds cash, which funds recruitment, which lifts effort and commencements. While the provider grows this is a virtuous circle. When cash falls it becomes a death spiral.

The third reinforcing loop is reputation-driven demand. A larger, successful cohort strengthens reputation, which pulls offshore demand directly, without an agent. It is slower and stickier than the agent channel.

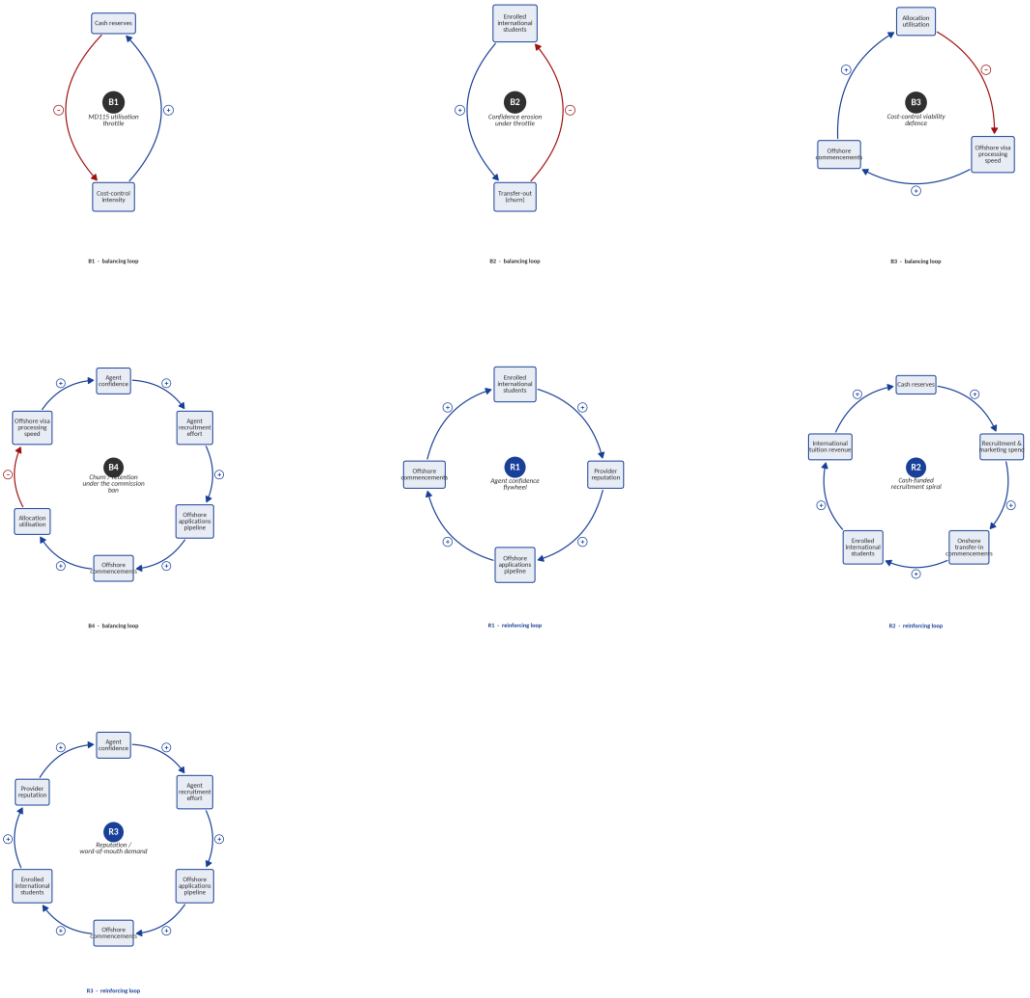
The first balancing loop is the MD115 throttle. Commencements raise allocation utilisation; past 80% and then 115% the directive slows processing, which suppresses further commencements. It is the self-limiting brake the policy is designed to be.

The second balancing loop is confidence erosion under that throttle. The same slowdown that the throttle creates also drains confidence, which cuts effort and commencements further. Because confidence is asymmetric, this loop overshoots: it withdraws effort faster and for longer than the mechanical delay alone would warrant, and turns a temporary slowdown into a durable slump.

The third balancing loop is cost-control. Falling cash raises austerity, which preserves cash but cuts recruitment and erodes reputation, weakening the loops that generate future cash. The fourth is churn under the commission ban: a larger cohort is a larger target for poaching, and the ban dampens that poaching, lifting retention while removing the provider's own transfer inflow.

Read as archetypes, the model is a limits-to-growth structure whose brake is the throttle, a tragedy of the commons on the shared allocation, a shifting-the-burden pattern in the cost-control response,

and a growth-and-underinvestment pattern when cash stress starves recruitment just as the brake bites.



The model combines these seven feedback loops into a single integrated system (the integrated diagram is at Appendix A).

4 From Diagram to Simulation

Six quantities pass the stock test, meaning they accumulate and would persist if their flows stopped. They are the CoE pipeline, enrolled students, agent confidence, provider reputation, cash reserves, and a smoothed measure of allocation utilisation. The pipeline and enrolment are conserved in student units, so a commencement leaves one and enters the other at the same rate.

Some choices are deliberate. Cash is a stock, and it is allowed to cross zero, because a provider at insolvency genuinely runs a deficit and the model should show it. Utilisation is smoothed into a stock so that the throttle responds with a short, realistic assessment lag rather than instantaneously; this also keeps the throttle from forming an ill-posed instantaneous loop with the commencements it limits. Demand, the allocation, fees, costs and the commission-ban strength are held exogenous, because they are the levers a provider or a regulator sets.

The delays sit where the real ones do. Recruitment takes two to four quarters to convert to arrivals. Confidence and reputation adjust over quarters. The course length governs how fast enrolment drains through completion.

5 Evidence and Validation

The calibration is anchored objectively. The regulatory mechanics are firm: the 80% and 115% thresholds come straight from the directive, and the ban date is fixed at 31 March 2026. The tier processing speeds are approximate, derived from the published one-to-four and five-to-eight week bands; the slow-lane speed is a proxy, because no time is published for it. The behavioural time constants and the provider's scale, fees, cost base and churn are representative archetypal values. The single largest gap is the absence of a named provider's own records, and supplying them would convert most of these from representative to fitted.

Validation runs in two stages. The first asks whether the model is built correctly. The Python reference and the JavaScript engine generated from the same specification agree at every checkpoint to machine precision. Every physical stock stays non-negative across the scenarios, while the financed cash stock is permitted to go negative. Every dashboard lever moves the model, and the throttle moves in the direction the directive requires: as utilisation rises past the cap, processing speed falls.

The second stage asks whether the model reproduces reality. It reproduces the reference-mode shapes for an at-cap provider: full processing speed below the cap, the Priority 2 throttle engaging as the cap binds, and the feared enrolment decline. A held-out severe scenario, never fitted, stays bounded and sane. The model also exports to vendor-neutral XMILE, and PySD reading that export reproduces the reference exactly, which proves the portable model is the model that was validated.

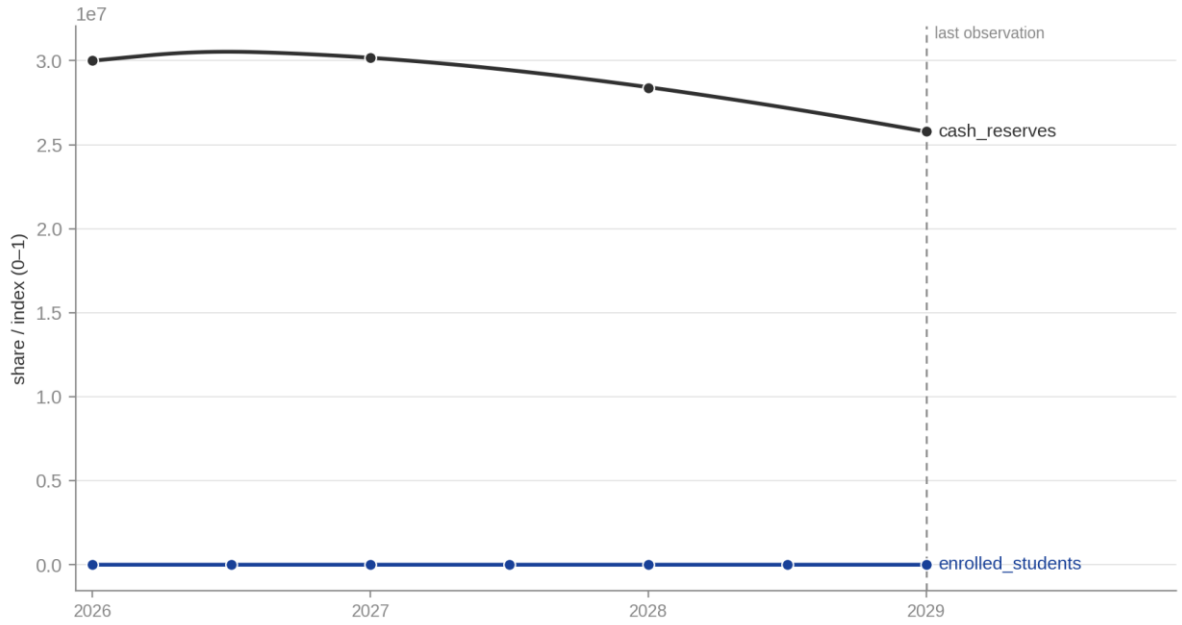


Figure 2. The validation backcast: the model reproduces the reference-mode shapes, with the projection to the right of the last marked observation.

6 What the Model Says

First, the regime is set by where the provider sits on its cap. Below the threshold MD115 is latent and the provider grows. At or over the cap the throttle bites and the trajectory bends down. The directive does not cause decline on its own; it caps a provider that has grown into it.

Second, the confidence asymmetry is what makes a short shock expensive. The throttle need only bite briefly to drop confidence sharply, and the slow rebuild then holds commencements down well after processing recovers.

Third, the shared cap turns a growth lever into a trap. Pushing offshore demand while the cap binds raises utilisation, slows processing, and drains confidence, so enrolment barely moves and the provider is worse off in every other respect.

Fourth, viability and enrolment are separable. A domestic cushion can hold cash up while enrolment is unchanged, and the same cushion can pull a provider back from insolvency, because cash that survives keeps funding the recruitment that would otherwise be starved.

7 Boundary and Limitations

The model is a single-provider model. Competitor responses are outside its boundary. It treats one blended international cohort rather than separate course types, and it represents the annual allocation as a smoothed run-rate rather than a calendar-year reset, which is defensible over three years but would be refined for a longer horizon.

The calibration is archetypal. The levels are illustrative and the policy mechanics are firm. Read shapes, not points.

8 Conclusion

Two policies that each look manageable combine, through feedback, into a question about survival. The model shows why, and it shows which levers reach and which run out of room. Staying under the cap or diversifying defends the provider; chasing demand into the cap does not; only a combination recovers the pre-policy level. The next step is to recalibrate the model to a specific provider's records and test that provider's own options against it.

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Validation record: the model was validated against (1) cross-implementation parity between the Python reference (sd_engine) and the generated JavaScript dashboard engine, agreeing to machine precision at checkpoints 0, 1, 2, 4, 6, 8, 10 and 12 quarters; (2) extreme-condition checks holding every physical stock non-negative while permitting the financed cash stock to go negative, with the MD115 throttle direction pinned negative; (3) reproduction of the archetypal reference-mode shapes and a held-out severe scenario remaining bounded; and (4) an XMILE durability proof in which PySD reading the export reproduced the reference to machine tolerance.

Appendix A. The integrated causal loop diagram

The whole-model diagram below combines the seven loops of Section 3 into one structure. It passed the legibility gate before inclusion.

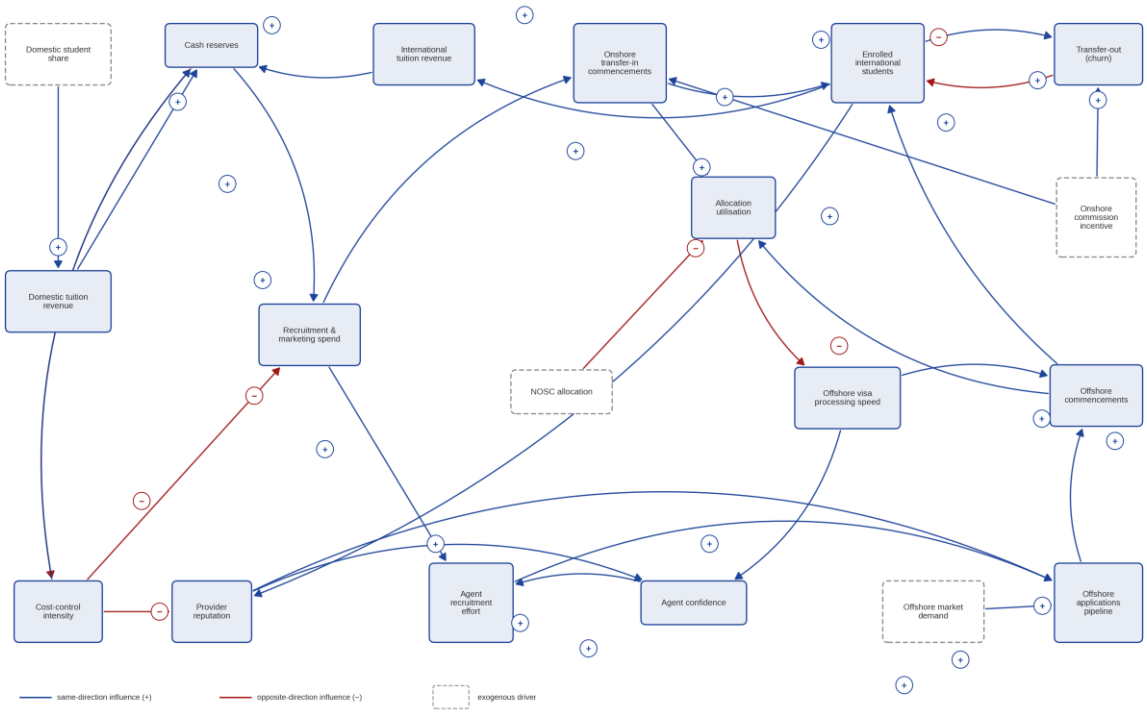

Figure A1. The integrated causal loop diagram, redrawn and legibility-checked.