

A RESPONSE TO THE IMF AND WORLD BANK'S LIC-DSF REVIEW

Clearing the Clogs

A plumber's guide to making the reformed LIC-DSF run at scale

Full response: tealinsights.com/research/lic-dsf-2026/

Teal Emery · Founder, Teal Insights · Ite@tealinsights.com

July 2026



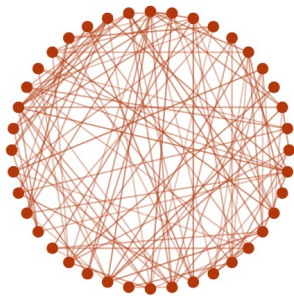
Clearing the clogs in the debt sustainability plumbing.

The LIC-DSF, the IMF and World Bank's debt-risk tool for ~70 countries, is one tangled Excel workbook. Its review, underway now, can fix the pipes.

TODAY • THE LOGIC IS A KNOT



Best practice flows one way, inputs to outputs.

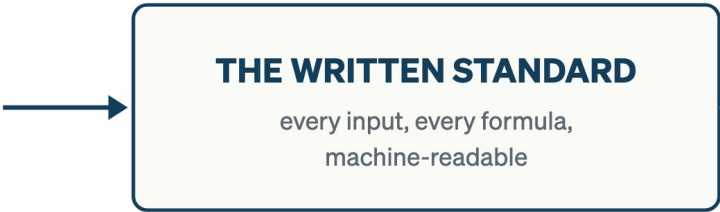


the LIC-DSF workbook, mapped

532 links between its 86 sheets

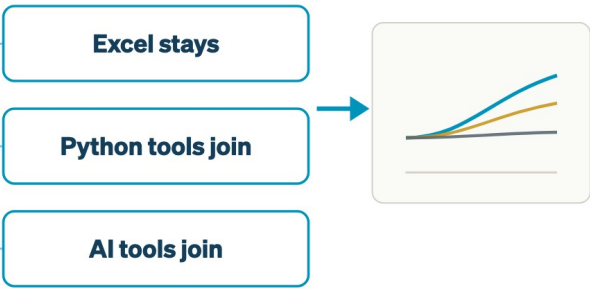
Here, 59 of 86 sheets loop back: a knot. The guidance note explains concepts; the calculations live only in the workbook.

THE FIX • WRITE IT DOWN, ONCE



- Data dictionary
- Clean rebuild
- Model connector
- Operability forum

TOMORROW • WHAT THE STANDARD UNLOCKS



The standard does not build these tools. It is the down payment that lets anyone build them, and a country run the answer.

~\$1M once

to fix the root, an order-of-magnitude estimate

VS

>\$500M every year

the Fund's annual spend on capacity development

Full response: tealinsights.com/research/lic-dsf-2026/

Sources: Teal Insights analysis, LIC-DSF IDA21 template (Aug 2025); IMF AR2025; FY2025 Budget Outturn.

The question is not whether the reforms are good. It is whether the Fund teams and finance ministries in ~70 countries can run them.

ON PAPER

A framework

TO BOARDS AND CREDITORS

A risk rating

TO THE PEOPLE WHO RUN IT

An opaque, cumbersome spreadsheet

TOIL

Hands-on work a machine could do, repeated by every team, producing nothing that lasts. It is what a clogged pipe is full of. Every reform adds another input to find and another step to re-run.

The plumber's perspective: we build open-source tools for sovereign-debt analysis, the LIC-DSF among them. Rebuilding a framework means examining every input, every transformation, every number, so you see where the pipes join, where they leak, and where they are missing.

Three clogs, one gap: the framework was never written to a shared standard.

1

The manual was never written

The concepts are taught well. The operating manual for the Excel template, the one the institutions' own guide points to, does not exist. So countries pay to be shown, team by team, cycle by cycle.

2

The workbook cannot be tested

A credit assessment this consequential must be testable and auditable. Today's ~200,000-formula-cell workbook is neither, so it cannot remain the default standard.

3

The best reform arrives blocked

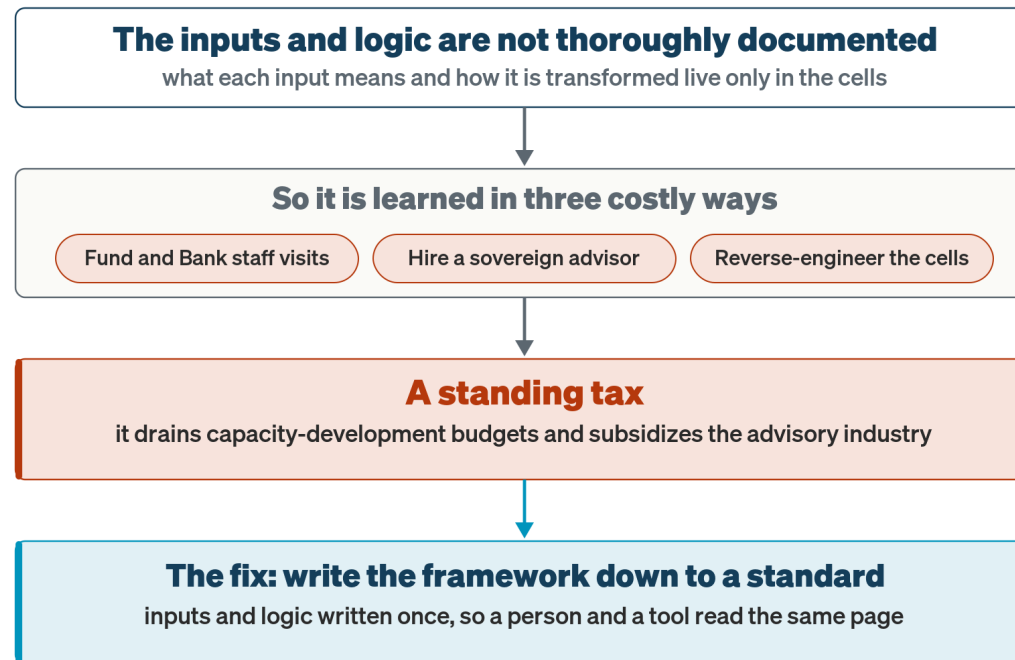
The long-term module is the reform's most promising piece. Its calibration dials and its output connector do not exist yet, so it will not run at scale.

Three faces of one gap, and each is cheap to clear. Blame the plumbing, not the users: the teams take heroic care; the fixes are about the tool they were handed.

The concepts are taught well. How to run the template was never written down.

Missing documentation is a standing tax.

The concepts are documented; how to run the template is not, so learning it is a recurring cost, team after team.



Teal Insights analysis.

TEAL INSIGHTS

A manual was promised.

The Interactive Guide tells users to download a “User’s Manual for the LIC DSF Template” before they begin. A good-faith public search finds no such document.

So the teaching runs through the most expensive channel.

Staff visits, hired advisors, or reverse-engineering the cells: scarce expert time transferring the same operating knowledge, team by team, cycle after cycle.

One document clears it.

Written once, to a standard, it serves all ~70 teams every cycle, and the page a person reads becomes one a tool can read too.

A credit assessment this consequential must be testable and auditable. Today's workbook is neither.

Best practice is a pipeline. The LIC-DSF is a knot.

A well-built model flows one way, inputs to outputs, so you can build and check it a step at a time. In the LIC-DSF, the sheets reference each other in loops, so the logic doubles back on itself.

SPREADSHEET BEST PRACTICE *a pipeline*

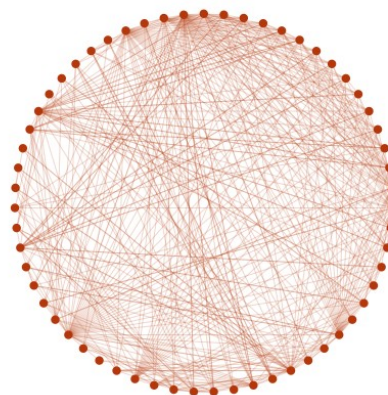


Start at the inputs and calculate forward.
You can build and check it one step at a time.

Any feedback stays local: a handful of sheets at most.

Best practice: ICAEW Twenty Principles; the FAST Standard.

THE LIC-DSF TEMPLATE *a knot*



Most of the sheets reference each other,
so the logic loops instead of flowing.

532

links between sheets

59 of 86

sheets loop back on each other

45 of 86

sheets hidden from view

Teal Insights analysis of the LIC-DSF IDA21 template (Aug 2025). Graph, proof, and code: github.com/teal-insights/lic-dsf-complexity

TEAL INSIGHTS

~200,000

formula cells across 86 sheets, 45 of them hidden

532

sheet-to-sheet links; 59 loop back on each other

~2,000

expected error-bearing cells at the audit literature's ~1%
formula error rate

Excel earned its place: installed everywhere, costs nothing at the margin, data stays in the building. The problem is not Excel. It is an undocumented workbook serving as the framework's standard.

Nobody can audit the logic, so nobody can prove the numbers are right.

The same calculation, two ways. Only one can be checked.

Both find the average interest rate on a country's new external borrowing.

WHAT THE SPREADSHEET STORES

one cell - Ext_Debt_Data!F131

```
=IF(F$122=0, "",
(SUMPRODUCT('Input 4 - External Financing'!$F$10:$F$19, Ext_Debt_Data!F$72:F$81)
+SUMPRODUCT('Input 4 - External Financing'!$F$21:$F$23, Ext_Debt_Data!F$83:F$85)
+SUMPRODUCT('Input 4 - External Financing'!$F$26:$F$30, Ext_Debt_Data!F$88:F$92)
+SUMPRODUCT('Input 4 - External Financing'!$F$32:$F$36, Ext_Debt_Data!F$94:F$98)
+SUMPRODUCT('Input 4 - External Financing'!$F$38:$F$42, Ext_Debt_Data!F$100:F$104)
+SUMPRODUCT('Input 4 - External Financing'!$F$49:$F$51, Ext_Debt_Data!F$107:F$109)
+SUMPRODUCT('Input 4 - External Financing'!$F$54:$F$56, Ext_Debt_Data!F$111:F$113)
+SUMPRODUCT('Input 4 - External Financing'!$F$59:$F$61, Ext_Debt_Data!F$116:F$118))
/Ext_Debt_Data!F$122*100)
Can you tell what it computes? Could you spot a typo?
```

THE SAME LOGIC, NAMED AND TESTED

an illustrative function in plain Python

```
def avg_rate(rate, borrowed):
    if sum(borrowed) == 0:
        return None # no new debt, no rate
    paid = sum(r * b for r, b in zip(rate, borrowed))
    return paid / sum(borrowed)

# Plain-English tests the computer rechecks on every run:
assert avg_rate([1.25, 7.25], [500, 500]) == 4.25
# borrow equally -> the rate sits halfway
assert avg_rate([1.25, 7.25], [1000, 0]) == 1.25
# zero from one creditor -> it cannot move the average
assert avg_rate([1.25, 7.25], [0, 0]) is None
# no new borrowing -> no rate to report
```

Each test names a truth the computer rechecks for you.

690

characters in this one cell

0

checks Excel can run on it

3

plain-English tests, below

Source: LIC-DSF IDA21 template, cell Ext_Debt_Data!F131 (Aug 2025). Python: Teal Insights.

TEAL INSIGHTS

SIT IN THE CHAIR

Can you tell what this formula does? Can you tell if there is a typo in it?

Only the function can be checked. The Python function below the Excel cell carries plain-English tests: each states something that must be true, and the computer re-checks it on every run. The Excel cell carries none, and nothing turns red when it breaks.

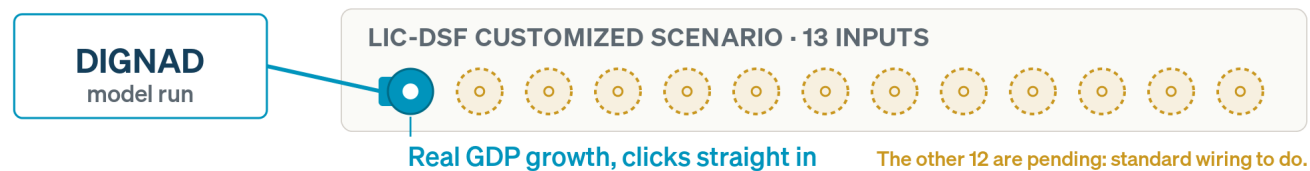
“Supervisors make banks test and validate far smaller models. The LIC-DSF gets neither.”

JPMorgan's London Whale and the UK's own fiscal watchdog were both bitten by spreadsheet errors, with more oversight than most debt offices can muster.

The reform's most promising piece arrives blocked: two pipes are missing.

The plug and the socket are not the same shape.

The customized scenario needs 13 inputs. Only real GDP growth reads straight off a DIGNAD run.



Only 1 of 13 plugs straight in.

The other 12 need standard wiring, not a new model.

The other 12: built or assumed by hand

- Revenue and grants
- Primary expenditure
- Grants
- Public sector assets
- Inflation (GDP deflator)
- Nominal FX depreciation
- Exports
- Imports
- Net transfers, official
- Net transfers, private
- Net FDI
- GDP deflator, USD terms

Source: LIC-DSF IDA21 template, Customized Scenario - public sheet (Aug 2025). Mapping: Teal Insights.

TEAL INSIGHTS

PIPE 1 · CALIBRATION

A model only answers well if its dials are set right. Calibrating them is slow, expert work with no written guide: the most consequential dial defaults to 50% on admittedly thin data, and each team works it out from scratch.

PIPE 2 · THE CONNECTOR

Of the 13 inputs the template's customized scenario needs, exactly one reads straight off a DIGNAD run. No published document says how to build the other 12.

Not reasons to stop: both are finite, standard practice, and can start now.

Write it down to a standard, so the tool carries the toil and the people do the policy.

1 · THE INPUTS

Every field named, with its units, currency, and permitted values.

2 · THE LOGIC

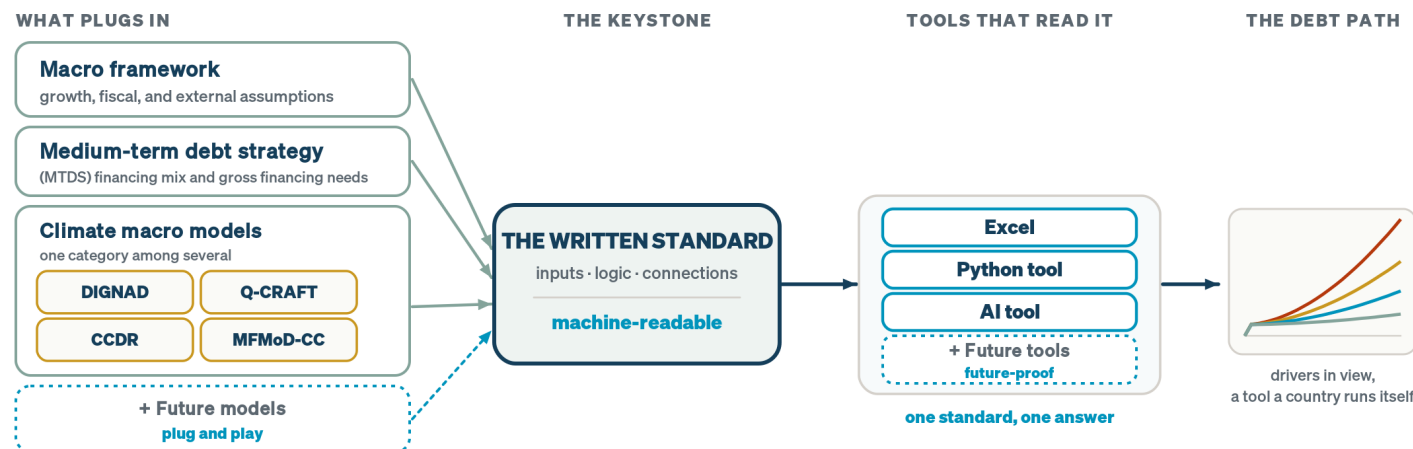
Every step from input to output, specified so anyone could rebuild it.

3 · THE CONNECTIONS

How each accepted model's outputs map to the template's inputs.

One written standard, and everything finally connects.

Write it down once, and a person, a machine, and an AI read the same page and return the same number.



Illustrative schematic. Teal Insights.

TEAL INSIGHTS

Four fixes: one per clog, plus the body that keeps them current.

1 · PUBLISH THE DATA DICTIONARY

Every input tagged with a standardized name, unit, and definition, shipped machine-readable. SDMX already exists and both institutions sponsor it: adoption, not invention.

2 · REBUILD THE WORKBOOK CLEAN, DOCUMENTED

One job, not two: rebuild to a published spreadsheet standard (FAST or ICAEW), retire the dead tabs, publish the logic as an open spec others can build on.

3 · BUILD THE CONNECTOR + PARAMETER LIBRARY

One agreed crosswalk from DIGNAD to the template, then the next model. Calibration defaults recorded with their reasoning, instead of traveling inbox to inbox and retiring with their owners.

4 · STAND UP AN OPERABILITY FORUM

Semiannual, on the GSDR pattern. It owns the dictionary, the connector standard, and the parameter library as living documents. The workbook grew to 86 sheets because nothing owned it.

Timing: the first dictionary, crosswalk, parameter sheet, and forum session need a mandate, not a budget, and can land by the Annual Meetings. The clean rebuild follows the October template release and runs about a year.

The fixes are boring, doable, and cheap. That is the point.

~\$1M

once

VS

>\$500M

every year

the heaviest fix: a couple of economists for a year, order of magnitude, aimed at the root

the Fund's FY2025 capacity-development spend, part of it teaching the same template by hand, room by room

FUND & BANK ECONOMISTS

trade template walkthroughs for the policy questions they were hired to answer

MINISTRY ECONOMISTS

stop reverse-engineering rating shifts by hand; time returned to budget and debt strategy

THE SHAREHOLDERS

stop paying to teach the same template yearly, and gain a credit assessment they can finally audit

Want the full thing? Here you go.

tealinsights.com/research/lic-dsf-2026/

22 pages, PDF on the page.

The complexity measurements are reproducible:
github.com/teal-insights/lic-dsf-complexity

The one-page figure travels free. Take it, share it, print it.

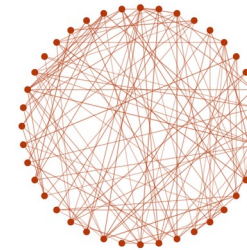
Teal Emery · Ite@tealinsights.com



Clearing the clogs in the debt sustainability plumbing.

The LIC-DSF, the IMF and World Bank's debt-risk tool for ~70 countries, is one tangled Excel workbook. Its review, underway now, can fix the pipes.

TODAY · THE LOGIC IS A KNOT



the LIC-DSF workbook, mapped



Best practice flows one way, inputs to outputs.

532 links between its 86 sheets

Here, 59 of 86 sheets loop back on each other: a knot.

The guidance note explains the concepts. The calculations live only inside this workbook.



THE FIX · WRITE IT DOWN, ONCE

THE WRITTEN STANDARD

every input · every formula · machine-readable

Data dictionary · Clean rebuild · Model connector · Operability forum

TOMORROW · WHAT THE STANDARD UNLOCKS



The standard does not build these tools. It is the down payment that lets anyone build them, and a country run the answer itself.

~\$1M once

to fix the root, an order-of-magnitude estimate

VS

>\$500M every year

the Fund's annual spend on capacity development

Full response: tealinsights.com/research/lic-dsf-2026/

Sources: Teal Insights analysis, LIC-DSF IDA21 template (Aug 2025); IMF AR2025; FY2025 Budget Outturn.

TEAL INSIGHTS