

Pension Plan Funding

Analysis of Funding Regulations

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Report for OECD on Funding Regulations

Basic mandate:

- Comparative analysis of regulatory framework across some OECD and Latin American countries concerning the funding of occupational defined benefit (DB) pension plans.

Supplementary questions:

- What funding and actuarial methods may be considered best practice? Should projected unit credit (PUC) be a universal norm?
- Pros and cons of imposing minimum funding requirements and maximum funding constraints.
- How much flexibility in setting assumptions should be allowed to actuaries? Should regulators establish a precise set of actuarial (economic and demographic) assumptions to be used in actuarial valuations?

Analysis of funding regulations - agenda

- Objectives of regulators.
 - One ship, with one captain, but many navigators.
 - Customary funding approaches and related issues.
 - Minimum funding requirements.
 - Maximum funding constraints.
 - Challenges facing everyone.
 - Challenges facing regulators.
- } country roundups

Objectives of Regulators?

Tax authorities:

- Prevent abuse of tax-favored status:
 - constraints on benefits and contributions;
 - controls against unnecessarily high funding.

Pension regulator:

- Protection of members' rights (vesting, etc, etc...)
- Prudent investment of fund assets.
- Security of benefits through sound funding.

In general:

- To encourage occupational pension provision?



Security of benefits through sound funding

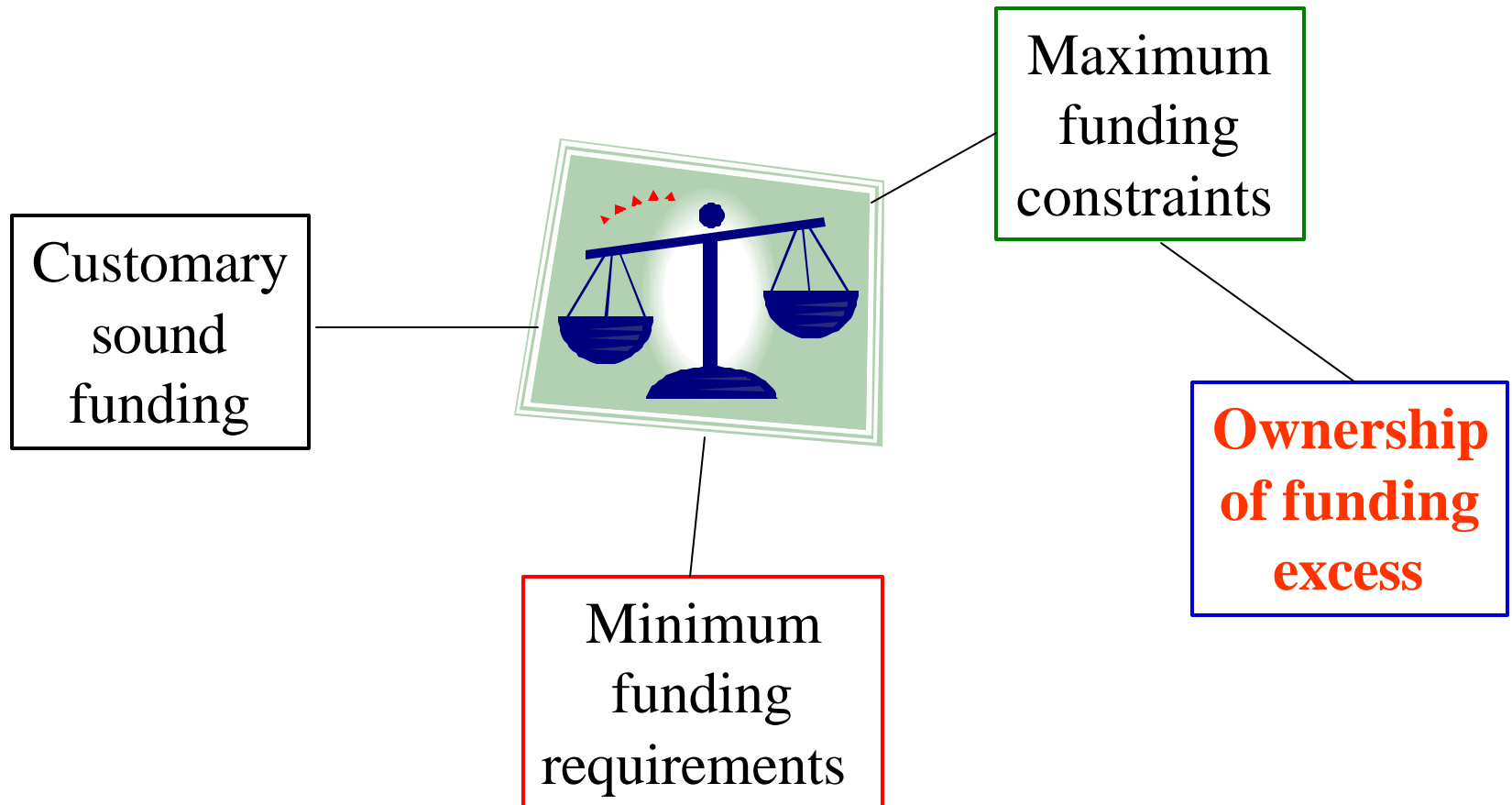
What is sound funding?

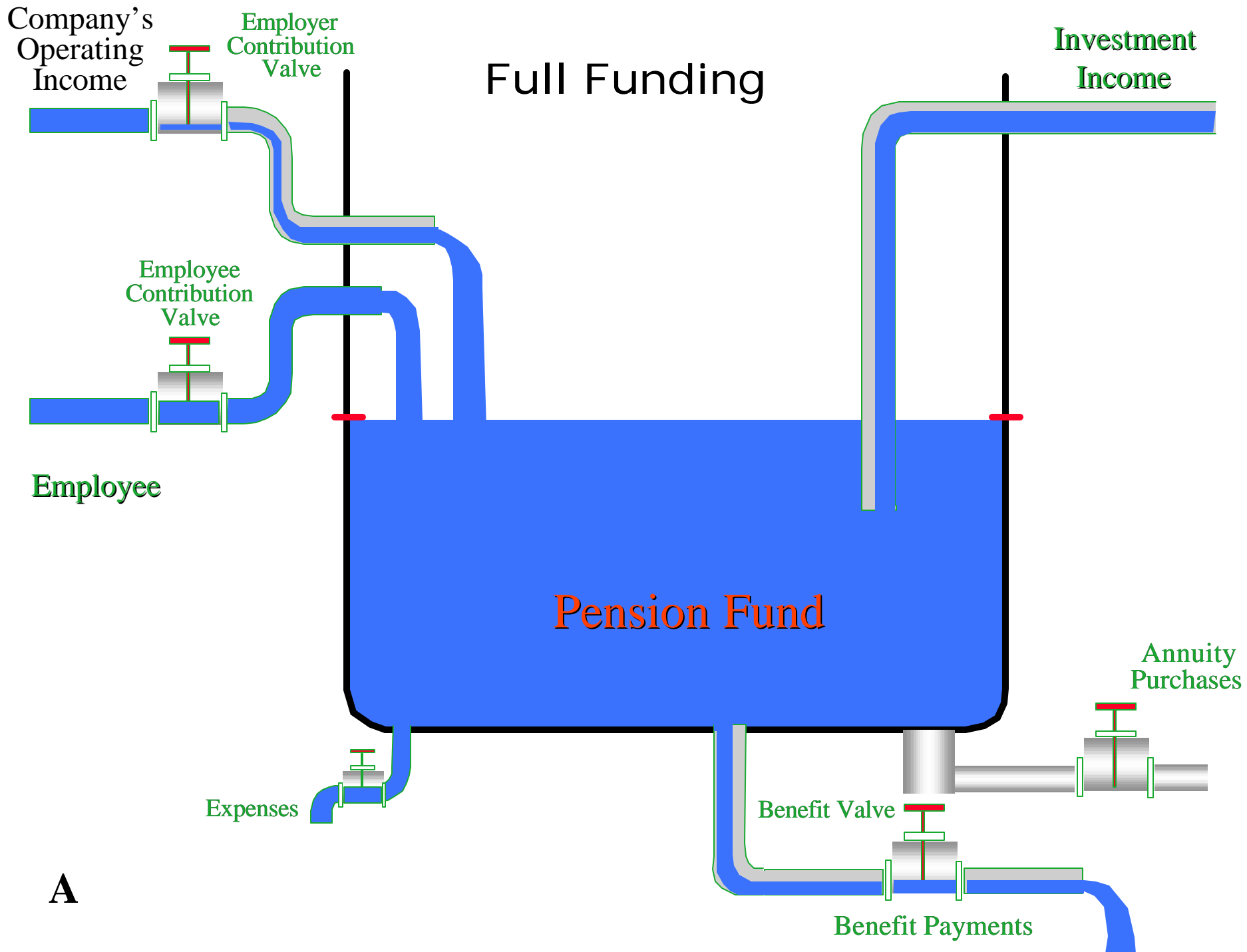
Setting aside assets on a systematic basis in advance of the time when the benefits are payable.

Recognizes the long delay between employees earning entitlements to benefits and actually receiving the payments, and gives substance to the employer's obligation.

It all sounded so easy, but it now seems so complicated.

One ship, one captain, three navigators





A

Company's
Operating
Income

Employer
Contribution
Valve

Underfunded
(déficit)

Investment
Income

Employee
Contribution
Valve

Employee

Pension Fund

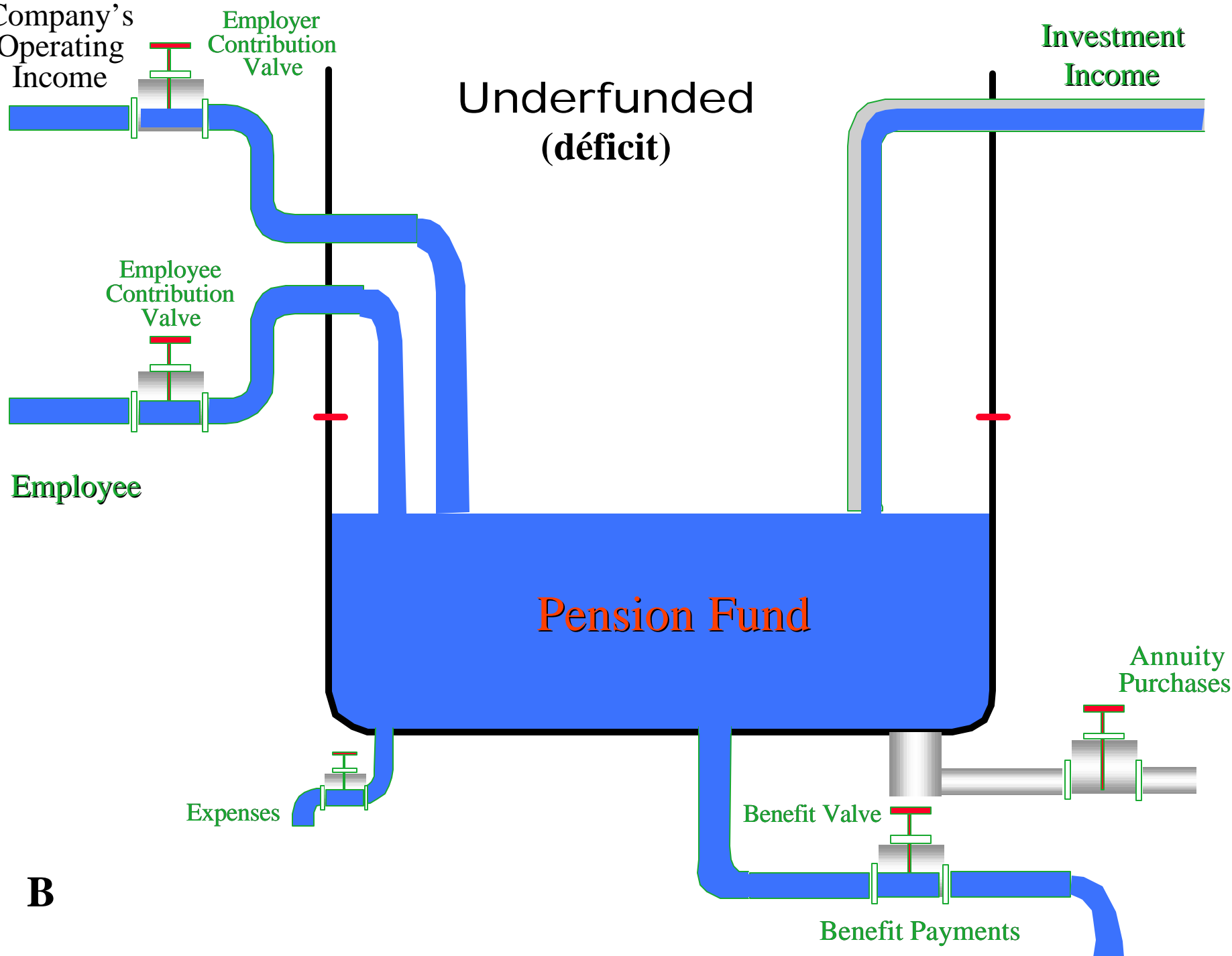
Annuity
Purchases

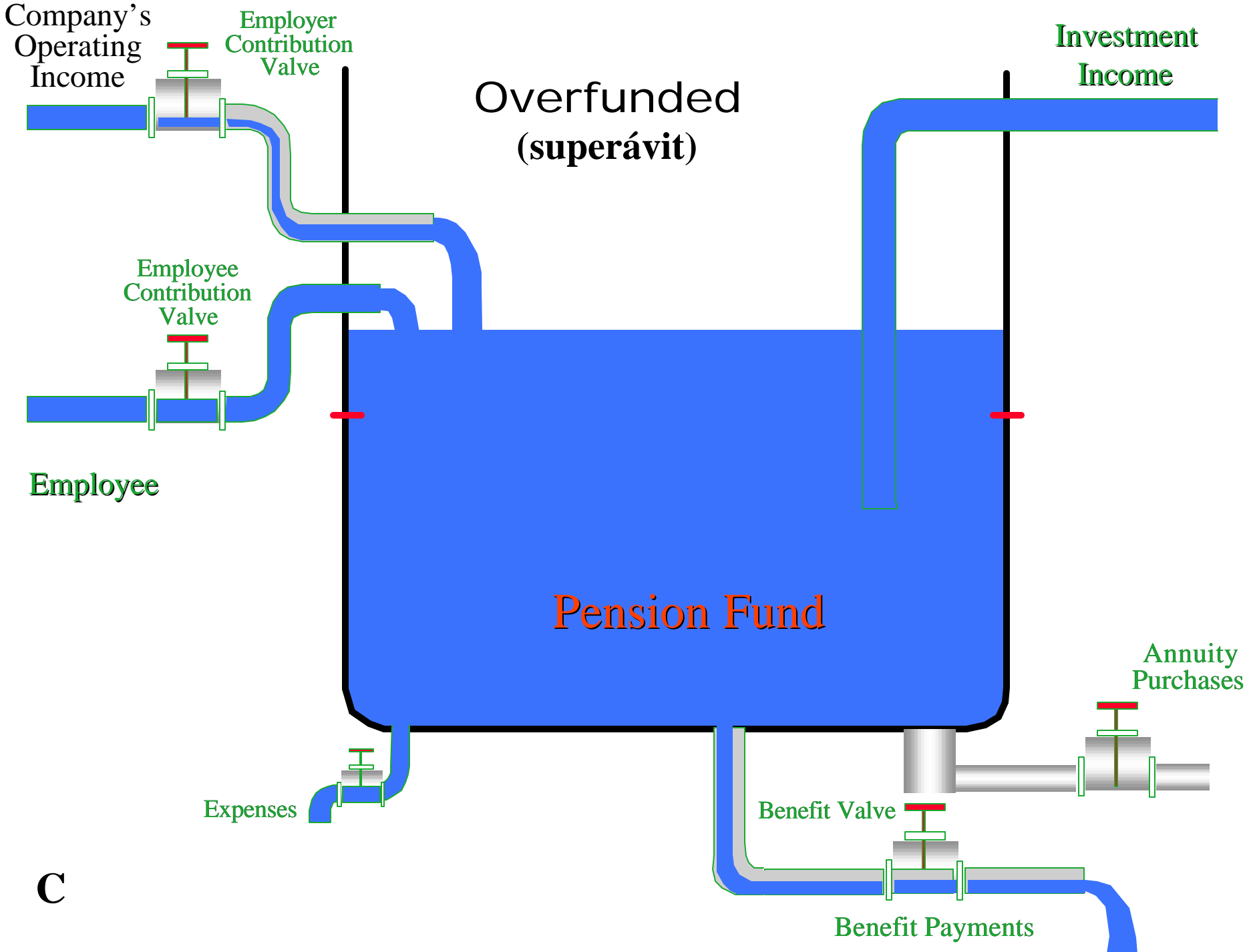
Expenses

Benefit Valve

Benefit Payments

B





C



Part 1 - Customary funding practices

Basic Considerations:

- Actuarial funding method.
- Actuarial assumptions.
- Valuation of assets.
- Adjustments for funding shortfalls and excesses.
- Frequency of valuations.

Questions:

- Is Projected Unit Credit becoming the norm?
- Should regulators prescribe any of above (for regular funding valuations)?



Actuarial Funding Methods

Accrued benefit funding methods (security driven):

- Current unit credit;
- Projected unit credit;
- Partially projected unit credit.

Prospective benefit funding methods (contribution driven):

- Attained age;
- Entry age;
- Aggregate.

Categories of Actuarial Assumptions

	Minimum funding	Customary funding	Maximum funding	Pension expensing
Best estimate (realistic)	Yes	Yes	Yes	YES
Prudent	Yes	YES	Yes	No
Certain	Yes	No	No	No

Valuation of Assets

Rapidly declining in popularity:

- Book and other historical values.
- Discounted cash flow.
- Various other methods.

Current and future focus:

- Fair market value.
 - Smoothed market value.
- } pros and cons
of smoothing

Funding shortfalls and excesses

- Only the Aggregate method prescribes the correction of any funding shortfall or excess (lifetime amortization).
- Other actuarial funding methods simply indicate amount of shortfall or excess (*relative to funding target*).
- Funding excess: use part to establish investment reserve or other contingency fund; amortize balance.
- Funding shortfall: amortize over, say, five years?

Note:

Amortization is a form of smoothing. Thus, if asset values are already smoothed, less need for additional smoothing, and vice versa.

Country roundup (customary funding)

- Canada. *Projected Unit Credit* has dominated for decades, but it could be replaced with *Partially Projected Unit Credit*.
- *Projected Unit Credit* is becoming increasingly dominant in many other countries (Belgium, Ireland, Portugal, UK and USA), replacing *Aggregate* and other methods.
- *Projected Unit Credit* plays only a relatively minor role in the Netherlands and Switzerland. Modified forms of *Current Unit Credit* apply in these countries. Other methods also are found in Switzerland.
- Brazil. *Current Unit Credit*, but also *Projected Unit Credit* and *Aggregate*.

Part 2 – Minimum funding requirements

Historical Focus:

- Law required plan sponsor to pay normal cost plus amortizations of unfunded liabilities and funding shortfalls.
- Maximum amortization periods were prescribed. Subject to tax constraints, faster amortizations were encouraged.
- Everything seemed to go very smoothly. Actuary remained prudent. Plan sponsor followed actuary's recommendations.
- Exception – North American, negotiated (UAW/USW) flat benefit plans. Always, chronically underfunded.

Minimum funding requirements

Recent focus:

- Asset/liability measures.
- Assets usually taken at market value, or variation thereof.
- Liabilities generally calculated using current salaries and a variation of Current Unit Credit [alternative = annuity purchase assumption].
- Accrued benefits to be valued = conventional accrued benefits, individual termination benefits, plan discontinuance benefits, ...
- Other significant variations from one country to another, e.g. use of 10% corridor, amortization periods for liquidating shortfalls, etc...

But, all asset/liability measures suffer a fundamental weakness.

Asset/liability measures

Which situation
is more worrying?

Plan sponsor	Flourishing company	Company in decline
Liabilities – pensioners	Nil	80,000
Liabilities – actives	100,000	20,000
Fund assets	85,000	85,000
Average age	35	58

Minimum funding requirements

Basic challenges:

- Benefit security depends on many factors, such as the plan sponsor's financial situation and its intentions regarding the plan, future funding policy, maturity of the plan, quality of the fund assets relative to liabilities, etc...
- Requirements must not distort investment strategies.

Thus, current and future focus:

- Plan-specific tests to determine adequacy of funding.

Related issues:

- Plan termination – solvent plan sponsor.
- Plan termination – insolvency insurance.

Country roundup (minimum funding)

- Canada and USA. Started with “historical approach”, i.e. normal cost + maximum amortizations. More recently, both countries added an asset/liability measure.
- Other countries using forms of asset/liability measures include Belgium, Ireland, Netherlands, Portugal and UK.
- Brazil. Normal cost plus maximum amortizations.
- Regulators and/or the actuarial bodies in many countries are now trying to develop more effective, plan-specific tests.
- Insolvency insurance. Now actively being considered by UK. Already in Japan, Ontario, USA (plus various countries with book reserve plans).

Maximum funding constraints

Potential abuses by plan sponsors:

- Sheltering otherwise taxable corporate profits.
- Tax deferred compensation for selected executives.

Three basic thrusts:

- Maximum benefit limits and anti-discrimination rules.
- Upper limits on contributions into the fund.
- **Constraints on subsequent funding excesses.**

Related issue:

- Plan sponsor's (lack of) control over funding excesses.

Measurement of funding excess

- Assets are usually taken at market or smoothed market.
- Liabilities are usually calculated under actuarial method used for customary funding, e.g. projected unit credit/attained age.
- Most jurisdictions allow some funding excess to be ignored, e.g. 10%-25% of liabilities.
- Otherwise, funding excess must be:
 - applied to reduce future contributions;
 - spent on improved benefits (e.g. indexing); or
 - withdrawn from the fund (some jurisdictions only).



Maximum funding constraints - challenges

With the benefit of hindsight:

- It would have been better if plan sponsors had been allowed and encouraged to sit on the funding excesses stemming from 1990s investment performance.
- These funding excesses were rarely the result of “abuse” by plan sponsors. Indeed, the challenge for regulators is to focus on real abuse, without discouraging prudent funding (e.g. Ireland).

Ownership of funding excesses:

- Discussion is academic in those countries with strict constraints on ownership and control of “surpluses”. Minimum funding will become the norm.

Country roundup (maximum funding)

- Belgium and Switzerland. Examples of countries with a fairly flexible attitude to maximum funding, but issues of surplus ownership push plan sponsors to minimal funding.
- Canada. Clear limits established by tax authorities, but anyway more recent surplus ownership issues push minimal funding.
- Brazil. Contingency fund is allowed = 25% of liabilities. If no action taken on excess within 3 years, funding excess must be spent on plan improvements or used to reduce both employee and employer contributions.
- UK and USA. Excess funds can be withdrawn, and sometimes must be withdrawn, and then special additional taxes apply.



Challenges facing all of us

Pension funding ran so smoothly for so long.

- Has something gone wrong?
- Could we have done better?
- What lessons can we learn?
- How can our experiences help other countries in their moves towards pension funding?
- We still need defined benefit pension plans. How can we stop their erosion?

Challenges facing regulators

To continue to discharge their legislative responsibilities (e.g. protecting plan beneficiaries), whilst:

- encouraging sound, controllable and non-volatile funding;
- avoiding costly distortions of the fund's investment policy; and
- persuading plan sponsors that they are still in control of their DB plans and that they should continue to offer such plans to their employees.

Not an easy task!