





required contributions ratios. The PenPIRR, on the other hand, takes the aggregate effect of insufficient contributions – the final funding deficit – into account.

- *Scenario IV – Same Present Value of Liabilities, Initial Underfunding, No Loss Amortization*

Similarly, if a different plan has an initial funding deficit, an identical net cash flow sequence implies that the plan is further and further falling behind in funding status (remember that in scenario I, the plan started and ended fully funded). The initial funding deficit grows with a rate equal to the discount rate. That information should be used to gauge a pension plan's overall success.

All of the four scenarios from above would yield the same standard money-weighted return measure as they have not (yet) affected cash flows. Each of these scenarios, however, depicts a different pension success story. I believe that we should provide the users of plan financial statements with a performance metric that is able to differentiate between these different scenarios. That performance measure would not focus on the investment decisions alone. It would not even stop at considering the timing and the amount of funding contributions. It would set the funding amounts in relation to the required contributions. And finally, it would quantify the performance impact of all other plan sponsor decisions, especially those on the benefit side.

## Conclusion

I hope to have illustrated that the standard money-weighted rate of return remains an inappropriate success measure **if we are interested in total plan sponsor success**. With only a slight modification to the existing methodology, that return measure can be turned into a really powerful total performance metric, the Pension Plan Internal Rate of Return.

The PenPIRR methodology translates all factors on plan sponsor success into an equivalent PenPIRR contribution. Investment manager decisions, plan sponsor decisions, and market influences all become comparable to each other and to our ultimate return expectation. As long as we are basing our funding cost expectations on the expected return of plan investments, it is the PenPIRR that will provide the ultimate information whether our expectations have been met or not.

Sincerely,



## Dr. Norman Ehrentreich

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