

**HERE ARE OBVIOUS SIGNS OF TROUBLE** with defined benefit (DB) pension plans. Numerous studies report that many plans are in poor financial health. More and more pension plan managers have discovered that the cost of providing promised benefits is much higher than they had anticipated. More and more plans are closed to new entrants, frozen, or terminated. All in all, the flow of negative publicity about DB plans is not expected to abate anytime soon.

Even though the number of DB plans has been declining since the mid-1980s, a sharply negative attitude toward them is a relatively new phenomenon. The DB pension system as a whole was considered rather healthy as recently as 1999. A couple of years later, the system was declared a disaster, due, for the most part, to a combination of falling interest rates and equity prices.

The “disaster” has prompted more people to participate in the pension debate. Economists, pension plan managers, public officials, accountants, actuaries, asset managers, and others have suddenly discovered the shortcomings of DB plans. I call the participants in this debate “analysts.” The number of these analysts has been snowballing. Virtually without a dissenting voice, the analysts have described the state of affairs in the pension system as unacceptable.

This debate is noteworthy for several reasons. Most analysts believe that the DB system is worth preserving. Most analysts also believe that the first step toward a better system should be a reform in pension accounting. Most analysts are confidently predicting that pension accounting will be reformed in the near future. Yet few believe that the upcoming reforms will be helpful for the survival of the DB system.

We are witnessing a remarkable development. A valuable part of the financial security system is rapidly disintegrating. Numerous authors have proposed new “economically proper” ways to evaluate DB plans. Yet these proposals have failed to impress current and potential plan sponsors, who either leave the system or decline to enter it. The disconnect between the proposed solutions and the required steps to make the DB system attractive to plan sponsors is simply extraordinary.

The purpose of this article is to explain why this collective wisdom has not worked so far, even though it’s based on seemingly valid and broadly accepted economic arguments. Two recent publications on shortcomings of DB plans are examples of well-presented opinions written by well-intentioned, well-informed, impeccably credentialed practitioners. A chairman of one of the largest state pension funds and a former chairman of a powerful regulatory commission published op-ed pieces in leading newspapers. Their words are unmistakably alarming: “Alice in Wonderland accounting fictions,” “latitude for abuse,” “shell game,” “shroud of mystery,” and my personal favorite, “Potemkin accounting.”

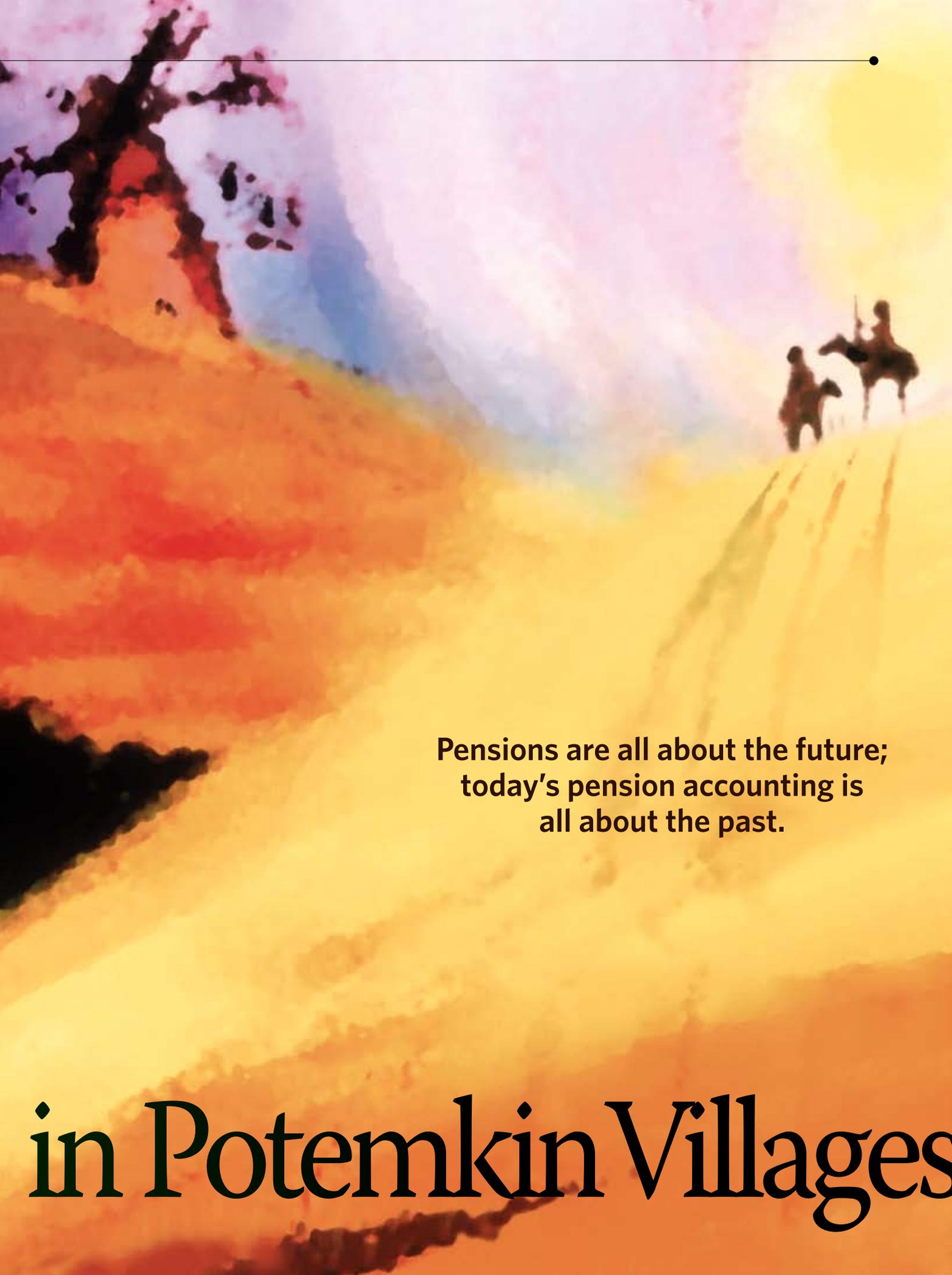
“Potemkin accounting” refers to Grigori Potemkin, a high-ranking Russian government official under Catherine the Great, who allegedly had false riverbank villages built for the sole purpose of camouflaging the true living conditions in the region. Even though historians consider this story apocryphal, the phrase “Potemkin village” has come to mean a ploy to conceal the truth. As a result, we have the gem of “Potemkin accounting.”

### Windmills of Pension Accounting

Let’s assume the Potemkin villages story is true, and the whole set—houses, barns, windmills, etc.—was indeed built to deceive the empress. In light of this assumption, pension accounting, as it stands at this moment, is one colossal Potemkin village built for the sole purpose of hiding the “true financial health” of real pension plans. Most analysts don’t like this village; they’re demanding “to bring transparency and honesty back to pension accounting”; they want to shed light on places where the sun has never shone. The analysts

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# Windmill Fighters



**Pensions are all about the future;  
today's pension accounting is  
all about the past.**

**in Potemkin Villages**

look at the village and see gigantic creatures with long arms whirling silently in space—the windmills. According to analysts, those windmills, the most visible structures in the village, are evil giants. The only way to fix the village is to defeat them.

That's what Don Quixote de La Mancha, Miguel de Cervantes' famous character, believed. He saw giants, armies, and oppressed people in places where his less romantic squire, Sancho Panza, observed much more prosaic objects. It's Don Quixote's creative imagination that brings him into this debate. He believed that his fight with the windmills was of great consequence.

And so do our analysts. They believe that reforming pension accounting is of great consequence. They have identified two windmills in the village, "all of whom" those analysts want "to engage in battle and slay."

The first windmill is the poorly chosen discounting rates used to calculate the present value of pension commitments under existing accounting rules. Analysts want these discounting rates to be equal to the current term structure of interest rates. As it stands now, the relationship between discounting rates used in existing accounting statements and the current term structure of interest rates involves a certain level of "smoothing." The analysts consider changing this relationship to a better one to be of paramount importance.

The second windmill is various volatility-concealing (smoothing) procedures in the existing accounting statements. Even though most of these procedures are optional, their elimination is considered important as well.

As soon as we triumph over these windmills, the analysts insist, investors, taxpayers, regulators, and plan participants will get everything they need to know about DB plans, and "we shall begin to make our fortunes."

Count me as a skeptic. It's true that pension accounting, as it stands now, is a mess. So, let's grant today's windmill fighters all their wishes and reform pension accounting any way they wish.

For a particular DB plan, the reformed accounting report shows the market values of liabilities and assets, clearly and prominently. Outside of these values, the reformed report contains little economically significant information of any kind. This is a fair indicator of the plan's solvency, if we consider the plan as a stand-alone entity. But in order to run pension plans prudently, managers must know a lot more than the availability of assets for termination.

I'd like to emphasize that reformed pension accounting is a big improvement over existing standards. At the same time, the usefulness of reformed accounting is clearly limited. Here's the area where information provided by reformed accounting is unquestionably helpful: *Reformed pension accounting shows the availability of assets for termination of a pension plan for a financially distressed plan sponsor.*

Can we do any better? Yes, we can. But to do so, we have to either expand the concepts of pension accounting, or leave pension accounting behind altogether. The problem is, traditional accounting is particularly unfriendly to any kind of forward-looking analysis, but that is exactly what DB plans need.

## Problems in the DB System

So far, solutions produced by the collective wisdom of numerous analysts have failed to halt the demise of the DB system. This failure is because analysts have focused primarily on ways to produce better accounting statements and have not acknowledged fundamental problems in the system.

*Pension regulations and pension accounting.* The problems in these areas have been extensively covered in numerous publications. It's hard to predict how sponsors of well-funded plans will react to the new regulatory environment, but it's clear that the survival of the DB system will depend on their reaction.

*Forward-looking analysis.* Most sponsors fund their pension commitments by means of investing in non-matching risky assets. The lack of information regarding the long-term impact of benefit design and asset allocation decisions is a major problem. Obviously, this impact is uncertain, but similar uncertainties are measured and managed in other areas. Theoretical concepts and analytical tools for dealing with uncertainties are readily available.

*Crisis of confidence.* The biggest problem in the DB system is the crisis of confidence in the notion that providing safe retirement is of value to plan participants and shareholders/taxpayers. To appreciate DB plans more, plan participants should be much better educated about them. To appreciate the value pension plan managers create, shareholders/taxpayers need clear measurements of the managers' performance as related to funding pension commitments. At this point, a successful resolution of this situation is a real challenge.

Pretending that these problems can be solved by reforming accounting rules is a financial deception in its own right.

## Realities of DB Plans

Stakeholders must look beyond pension accounting in order to get vital information about ongoing DB plans. Unfortunately, those who try to look beyond accounting discover that little information is available. Most publications don't even acknowledge that there is life outside of accounting. The confusion runs so deep that, in order to take the first steps toward asking the right questions, we have to go back to the basics of DB plans.

*What is a pension plan?* Most publications on the subject assume that a pension plan is a financial instrument. I don't believe this assumption is applicable to most plans; pension plans are not tradable assets. A pension plan is a human resource management tool, and should be analyzed as such. Methodologies for the analysis of financial instruments may not necessarily apply to pension plans.

*Accounting value vs. economic value.* In general, we measure or value objects of interest to achieve a certain objective. Different objectives may require different measurements. When the price of termination is declared to be the only economically proper measurement of a pension plan, it implies that termination is the only "economically proper" objective for a pension plan. But ongoing plans have other legitimate objectives and measurements.

*Pricing vs. funding.* There is a fundamental difference between pricing and funding cash flows. Many authors assume that a

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pension plan is a financial instrument that must be priced. The objectives of pricing and funding are different and may require different measurements of the cash flow. The goal of most plan sponsors is to fund the pension commitment, not to price it.

*Risk management vs. risk hedging.* Many publications suggest that pension risks must be hedged away at any cost. This “one-size-fits-all” solution is an unnecessary simplification of the problem. Risk management is much bigger than risk hedging. For some sponsors, effective risk management can create value for shareholders/taxpayers and plan participants. For others, pension risks may be too much to bear and should be minimized. The methods of broadly defined asset-liability management should be applied to pension plans individually.

Recognition of these realities would be a good step in the right direction.

### The Potemkin Village Remains

One of the biggest problems of the DB system is that forward-looking information is mostly unavailable to DB plan stakeholders. Plan participants aren't properly informed about the financial health of their pension plans. Current accounting reports are messy and confusing. Today's windmill fighters want to purge all forward-looking information from these reports. If numerous analysts want to see certain accounting values clearly “marked to market,” there's no reason to oppose the reform that grants their wishes. But pension accounting is unlikely to emerge as the ultimate source of vital forward-looking information. *Pension accounting is a mess not because it gives bad answers, but because it answers the wrong questions.*

Stakeholders of ongoing DB plans need reasonable estimates of the resources required to fund promised benefits. Plan sponsors would greatly appreciate the ability to grasp how their pension decisions affect their long-term financial health. Pension accounting does nothing of the sort. It deals with the ability of the sponsor to *terminate* the plan; it provides little about the ability of the sponsor to *fund* promised benefits.

Information about future benefit levels and contributions as well as the impact of asset allocation won't be available to the users of traditional accounting statements. In particular, pension accounting completely conceals the riskiness of the actual policy portfolio. Therefore, pension accounting will continue to be a Potemkin village to stakeholders of ongoing plans.

### Compulsory vs. Flexible Accounting

Any forward-looking analysis relies on forward-looking assumptions and levels of risk tolerance. Accounting statements that incorporate forward-looking measurements may not be “transparent” in a conventional sense. But is it absolutely necessary for all stakeholders to be in perfect agreement about accounting figures?

Imagine that 10 percent is used as the long-term return on assets in the pension expense calculation. Some analysts may rebuke the plan sponsor and its consultant for not using “real-world assumptions,” but they can simply ignore the pension expense calculated under this assumption. Any analyst is free to enter her

own return on assets assumptions into a simple worksheet and get her own pension expense figure.

In reality, these marked-to-market values aren't hard to get even without the proposed accounting reforms. Fairly modest efforts are required to "un-smooth" the values reported in existing accounting statements. Getting the marked-to-market values may present a certain level of inconvenience. Different analysts may come up with somewhat different estimates, but the fact remains that the marked-to-market values are available. So, what are we really discussing—financial deceptions or acceptable levels of inconvenience for analysts?

Few believe the complexities of today's business practices can be accurately described by a handful of bottom-line figures. Financial arrangements that involve contingent future cash flows of uncertain timing and magnitude (such as non-tradable, non-transferable pensions or employee stock options) are hard to squeeze into the Procrustean bed of existing accounting concepts.

We're facing two fundamentally different types of accounting. As far as past events are concerned, both types provide identical information. The differences between them become evident when there is an attempt to "account" for uncertain events in the future.

The first type—"compulsory accounting"—allows no deviations from its results. Everyone must agree with every single reported value. There's only one economically proper set of assumptions, aka real-world assumptions. The proponents of compulsory accounting believe that accounting reports can present future economic events transparently.

The second type—"flexible accounting"—provides the same components as compulsory accounting. However, the components of accounting reports are presented under different scenarios. For example, the pension expense can be calculated using both 10 percent and 5 percent as the long-term return on assets. Liabilities can be calculated using several discounting procedures. In other words, flexible accounting provides a collection of building blocks for the calculation of bottom-line figures and leaves the final calculation to analysts. The reported bottom-line figures are just examples of proper applications of accounting rules. If, for example, you don't like the liability used in the calculation of a certain bottom-line figure, use your own liability, be a mensch.

Flexible accounting is as proper as compulsory accounting; both types present audited financial information. The proponents of flexible accounting, however, exhibit a different attitude toward future events. They believe that we live in a risky world, and everyone has a right to have unique valuations of future events. The proponents of compulsory accounting believe that

the future can be "transparent." In contrast, proponents of flexible accounting humbly acknowledge that *we don't know what will happen in the future*.

Today's windmill fighters can function only within the boundaries of compulsory accounting. Their rightful indignation wouldn't impress anyone in the flexible accounting environment. If an analyst doesn't like a figure based on a 10 percent assumption for the long-term return on assets, a figure based on the assumption of 5 percent is right next to it. If the analyst doesn't like the accounting pension "income," the analyst should be at liberty to ignore the income altogether or apply any (positive or negative) P/E multiple to it. Once again, different objectives may require different valuations.

Reflections of compulsory accounting are everywhere. Proponents of flexible accounting are few and hard to find.

### Flexible Accounting in Action

Here is an example of how to "account" for the long-term economic cost of running a pension plan in that framework.

*Benefit stream.* Calculate the stream of benefit payments based on past and future service. It should be emphasized that the benefit stream is a series of volatile contingent future cash flows.

*Payroll stream.* Calculate the stream of payroll values for the existing active population. This stream is a series of volatile contingent values as well.

*Present values.* Calculate present values of the benefit and payroll streams. The discounting procedure is based on the returns produced by the existing policy portfolio. The streams are discounted using compounded observations of the policy portfolio returns. The distributions of both the present value of future benefits (PVFB) and the present value of future payroll (PVFP) "know" something about the riskiness of the policy portfolio, the volatility of benefit payments and payroll, and the demographic and benefit characteristics of the plan.

*Long-term cost.* The long-term cost as a fixed percentage of payroll is defined as the difference between the present value of future benefits and the market value of assets divided by the present value of future payroll:

$$\text{Cost} = \frac{\text{PVFB} - \text{MVA}}{\text{PVFP}} \text{ but not less than zero.}$$

The distribution of the long-term cost should be of great interest to all stakeholders of the plan. In particular, various percentiles of the long-term cost may provide valuable insights into the risks associated with running a pension plan. An accounting report containing this kind of information can be useful for analysts with various levels of risk tolerance. This is flexible accounting in action; the report presents a set of outcomes of future economic events for all levels of risk tolerance.

This approach may generate objections from the proponents of compulsory accounting. Accounting statements may not be the right place to express one's risk tolerance. My response to this argument is "That's correct." If traditional accounting reports

can't accommodate different levels of risk tolerance, stakeholders have to get this information elsewhere.

The proponents of compulsory accounting may also say that if anyone could pick any number as the "pension expense," there would be no transparency in accounting statements. My response to this argument is "That's correct" as well. The future isn't transparent, period.

### Conclusion

This article is dedicated to those analysts who have promoted better accounting rules as a remedy for the problems in the DB system. There is no doubt that new accounting rules are better than the old ones and should be adopted. A statement that's "marked" to a real market is better than the one marked to "Alice in Wonderland accounting fictions." However, if that real market is chosen arbitrarily and has little to do with the fundamental problems in the DB system, we're not much closer to finding the solutions the system needs.

The usefulness of the new accounting reforms is greatly exaggerated. As far as the survival of the DB system is concerned, those windmills are only of marginal importance. Accounting

is about the past; pensions are about the future; no accounting reform can resolve this conflict. Most important, the new accounting rules will do little to halt the demise of the DB system. At some point, the windmill fighters may design a perfect accounting statement for DB plans and discover that it applies to no one.

The analysts have spoken, loud and clear: Dear plan sponsors, we want you to run your plans as ongoing but value them as terminated. We also want you to know that if, at some point, we find your pension assets insufficient to terminate your plans, the punishment will be swift and harsh. So far, the sponsors' response has been loud and clear as well: We're not interested, thank you very much. ●

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### References

Kramer, O. [2006]. "Time for the Truth about Public Pension Deficits," Financial Times, Jan. 13, 2006.

Levitt, A., Jr. [2005]. "Pensions Unplugged." The Wall Street Journal, Nov.10, 2005.



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