Eye-Bonds:
A new Vision for Federal Support of Biomedical Research

Karen Shaw Petrou
Managing Partner
Federal Financial Analytics, Inc.

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I would like to ask you for two things after I explain what an Eye-Bond is and how I think it holds tremendous promise for unlocking billions of institutional-investor dollars for the cure and treatment of disease:

1) Give us suggestions for ways financial-services firms would structure these financial instruments to enhance investor interest and reduce taxpayer risk; and
2) Advance this idea – already laid out in detail in draft Senate legislation – so that the White House and the next Congress use it to fund treatment and cure, instead of continuing to deprive biomedical research of urgently-needed dollars.

Of course, to do this, you need to know what an Eye-Bond is. In short, it's a financial instrument backed by a limited guarantee from the federal government in a pilot $1 billion program to fund treatment and cure of an array of disorders that cause blindness and vision impairment. Think wounded warriors robbed of their vision, children losing their sight before finding their way through the educational and vocational maze, millions of older Americans losing sight due to age-related causes, and, yes, folks like me. If we could mobilize a federal backstop that frees up this much money at very low risk to taxpayers, how many more lives will be happier, safer, independent, and economically productive?

And, if new financial structures with a limited federal guarantee work for blindness, why not for cancer and many other diseases and disorders. If the Eye-Bond serves as proof of principle for this type of

federal support, we will together have opened a vital avenue for institutional-investor support of this critical human need.

I'll provide you with a more detailed description of the instrument and the legislation in a moment. But, before I do, I would be woefully remiss if I didn't first thank those who have brought this idea to the brink of meaningful Congressional action. First, let me thank Sen. Tom Harkin and his terrific staff. Sen. Harkin is chairman of both the Senate Health, Education, Labor, and Pension (HELP) Committee and the Labor, HHS, Education, and Related Agencies Appropriations Subcommittee. In short, he's the man with the pen, and, because he's seen far too many promising projects scuttled only due to lack of federal dollars, he's used it to get this Eye-Bond bill drafted before he – very regrettably – retires at the end of this Congress.

I would also like to thank Dr. Paul Sieving, director of the National Eye Institute, and Dr. Matt McMahon there for help determining how this idea works best with NEI's needs and priorities.

Eye-Bond Background

I sit on the board of the Foundation Fighting Blindness and returned home – from Boston, by the way – in March of 2013 stuck by a presentation FFB organized from a group of venture capitalists. They spent it bemoaning changes in financial markets that have starved them of dollars for promising blindness cures.

Thinking about financial-market structure and regulation is what my husband and I do in our day jobs, so we sat down with a few clients focused on social finance – and a shout-out of thanks to those of you here today – seeing if there is a way to build on MIT's great work in cancer to address blinding disorders.

We couldn't find a way to do this in a purely private financial instrument. Since we live in Washington and also spent a lot of day-job time on federal policy, we then thought through the uses to which a limited federal guarantee could be put.

Based on this, we circled back to the Foundation Fighting Blindness. Thanks to it, FFB's chairman Gordon Gund, and the firm's pro-bono lobbyists – the law firm of Akin, Gump, Strauss, Hauer, and Feld – we mobilized support from Sen. Harkin and his staff, talked the concept through with people on Capitol Hill and at NEI, and worked out our best construct to ready it for legislative action.

The Eye-Bond

Thus, on to the Eye-Bond. As I said, the idea here is principally to use a federal guarantee – even that of a limited one – to do two things:

- end the "story paper" aspect of biomed-focused financial instruments; and
- support yields suitable for both the investment objectives and the regulatory constraints governing institutional investors like insurance companies, mutual funds, and pension funds.

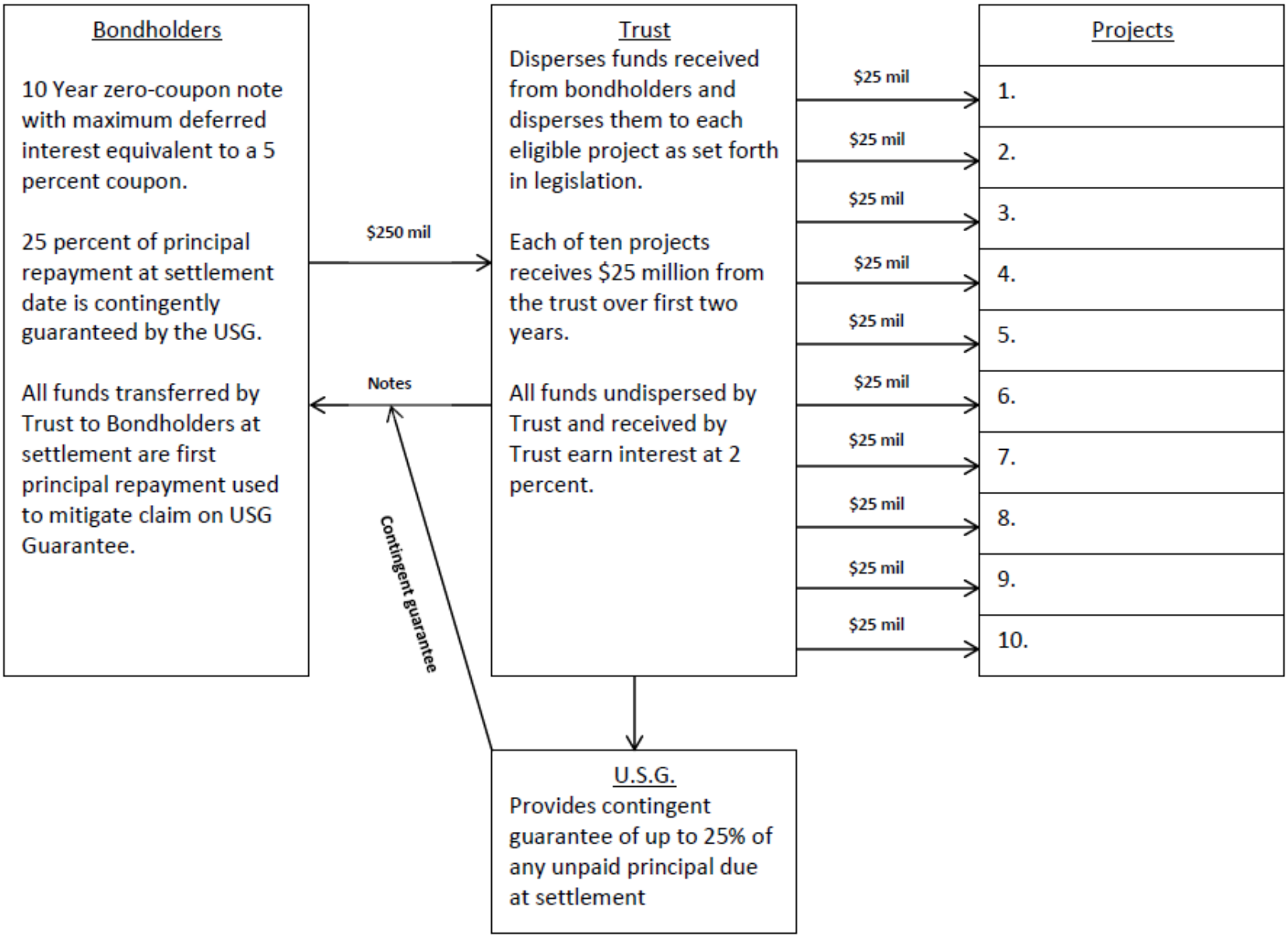
Of course, when taxpayer dollars are involved, regulatory constraints and policy considerations also must apply. As a result, the Eye-Bond legislation includes a series of controls designed to ensure that:

- bonds are used to fund the most likely clinical trials aimed at treating and curing blinding disorders. NEI plays a critical role here as, essentially, the bond underwriter, with its costs to do so reimbursed through bond proceeds;
- bond structures ensure sufficient funds go back to firms conducting trials and at the same time are provided through instruments that do not put institutional investors at risk through, for example, undue reliance on rating agencies. Treasury is thus established as the financial regulator in the Eye-Bond legislation; and
- the entire structure is transparent so that, if it is successful over the course of the five-year pilot, it creates a strong platform to fund the cure and treatment of many other disorders, not just blindness.

One important point: the legislation is premised on debt structures more akin to syndicated loans than securitizations: that is, investor funds are collateralized not just by specific assets related to a trial, but also by the legal obligation of the borrower to repay the debt in full or file for bankruptcy. As a result, firms would have to use other resources to repay the debt incorporated in the Eye-Bond such as obtaining funds from others or divesting resources. Should these not be sufficient to repay the obligation in full, then whatever the debtor's got is what is used to repay the investor. As a result, the guarantee is a last resort backstop for taxpayer protection. Conversely, successful firms with the resources to repay the government are required to do so fully to decrease the principal amount of the bond. Thus, trials that hit the ball out of the park may well pay back more in principal than they received. This is perhaps daunting, but still better from a firm's perspective than giving away equity – with the entire upside—as a funding vehicle in the early-stage process.

The following chart lays out one structure that achieves this Eye-Bond design:

Eye-Bond Structure



As I said, this is one potential structure. Now, on to next steps.

Making This Happen

As I said, we need your help. Is this a good structure for the Eye-Bond? Even if it is, are there others that may be better? The legislative text drafted by Senate counsel does not specify how Eye-Bonds are to be structured – this is left in broad terms to the issuer. However, these structures are critical to projecting likely taxpayer risk and, then, to determining the budget cost of the Eye-Bond. I know for sure that a limited guarantee is far more cost-effective than a direct grant, but eligible projects are also farther along in the clinical-trial process than is conventional for the National Institutes of Health. As a result, it's critical to ensure not only that taxpayer risk is carefully constrained, but also that the bonds do not suck federal funds from basic research because the guarantee unduly subsidizes investors.

There's a sweet spot here for using federal backstops to increase investor willingness to fund translational research without taking money out of basic research or, conversely, subsidizing investments that otherwise would be made.

Have we hit this right in the ten-year, zero-coupon bond I've described? If not, how to make it better? What else might work, taking into account not just investor demand, but also taxpayer risk?

Next Steps

In the lame-duck session of Congress set to start after the midterm, members of the House and Senate will be focused on many issues, most importantly the legacy of departing Members and keeping the federal government's operations going as close to normal as current fiscal-policy deliberations evolve. We'll be struggling a bit to get the question of new ways to fund biomedical research on this crowded agenda, but we'll try hard to get this legislation introduced with bipartisan sponsorship in both the House and Senate. With this, we'll build a platform for substantive action in 2015.

This conference is a critical meeting ground between financial engineering and patient need. I ask for your expertise and passion in making the Eye-Bond a robust, resilient, and efficient way to join your work to federal priorities so that a new way to fund biomedical translational research advances. Although the Eye-Bond is focused on blindness, it is meant to demonstrate proof of principle so that policy-makers realize the power even a limited federal guarantee can provide to so vital a cause as curing and treating all the diseases and disorders that bring us here today.