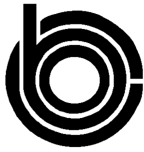

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

October 8, 1997

H.R. 230

Natural Disaster Protection and Insurance Act of 1997

As introduced on January 7, 1997

SUMMARY

H.R. 230 would require the Secretary of the Treasury to auction disaster excess-of-loss (XOL) contracts on the open market to insurers and reinsurers to cover insurance industry losses resulting from natural catastrophes in excess of $10 billion. The likely budgetary impact of H.R. 230 cannot be quantified because it will depend on how the bill is implemented—specifically, on the structure of the XOL contracts. Prior to specification of contract terms by the Secretary of the Treasury, one cannot discern what form the XOL contracts would take, how many such contracts would be demanded, or what types of disasters or geographic areas would be covered in each contract. Moreover, the bill does not specify the type of auction to be used. Without such details, CBO cannot develop an estimate of the bill's budgetary impact, although we believe that enacting this bill would likely result in significant net costs to the federal government. CBO estimates that enacting H.R. 230 would affect direct spending, possibly by billions of dollars, over the 1998-2007 period. Because the bill would affect direct spending, pay-as-you-go procedures would apply.

H.R. 230 does not contain any private-sector mandates as defined in the Unfunded Mandates Reform Act of 1995 (UMRA), but it would impose an intergovernmental mandate on state governments. CBO estimates that the cost of complying with this mandate would not exceed the threshold established in UMRA.

DESCRIPTION OF THE BILL'S MAJOR PROVISIONS

Under H.R. 230, the Secretary of the Treasury would auction disaster XOL contracts on the open market to insurers and reinsurers (including state insurance pools) to cover damages to residential and commercial property from hurricanes, earthquakes, tornados, and tsunamis. The contracts would be similar to disaster reinsurance options trading on the Chicago Board of Trade. The XOL contracts would last for one year and would be triggered by insurance industry losses in excess of $10 billion. The maximum amount of industry losses that would

be covered would depend on the payout ratio of the contacts, and the maximum amount paid out each year would be limited to $25 billion, adjusted annually for inflation. The bill would require the Secretary to auction annually at least 25 percent of the maximum number of contracts that could be made available each year, where the maximum is defined in terms of the $25 billion limit on total payout for each year. The Secretary would determine the structure and actual payout ratio of the contracts.

Contracts would be auctioned with a minimum reservation price that would reflect three factors: a risk-based price, a cost-of-capital adjustment, and an adjustment to cover operating and administrative expenses and contributions to a mitigation fund. A federal commission would establish expected industry losses from natural disasters, which would help determine the risk-based price. Except for a maximum of 5 percent of the reinsurance contract premiums that would go into a mitigation trust fund, all other premiums would go into a reinsurance trust fund. All payments on the contracts would be made from the reinsurance trust fund.

The bill would also require a number of studies and reports. The following discussion focuses on the potential budgetary impact of the XOL contracts.

BUDGETARY EFFECTS

Depending on how the XOL contracts are structured, enacting H.R. 230 would likely increase direct spending over the long term. The receipts to the federal government from selling the contracts may not be sufficient to cover spending from the fund for payments on the contracts, for administrative expenses for the reinsurance fund, and for various studies. In addition, H.R. 230 would increase discretionary spending for the mitigation program, for administrative expenses for the federal commission, and for several other studies, assuming appropriation of the authorized amounts.

Direct Spending

Although the impact of H.R. 230 on the federal budget cannot be quantified, we believe that enacting the bill would likely result in a net increase in direct spending by the government for the following reasons: (1) at least some payouts on the contracts are likely to occur, (2) the price of the XOL contracts is more likely to be too low than too high, and (3) other federal payments for disaster assistance would not be reduced significantly as a result of enacting H.R. 230.

Payouts on the Contracts Are Likely. Recent history has demonstrated the possibility that natural disasters causing more than $10 billion in insurance industry losses will occur in a year. Insurance industry losses exceeded $10 billion (in 1995 dollars) in 1992 with Hurricane Andrew and in 1994 with the Northridge Earthquake. A recent study of hurricane damages provides evidence that, on average, at least one hurricane with damages exceeding $10 billion will probably occur within a ten-year period. Therefore, it is likely that the federal government eventually would have to make payments under XOL contracts within the next ten years. Should the contracts not be priced sufficiently to cover future payments (as argued below), the contracts could result in a net cost to the federal government.

Likelihood That Contracts Would Be Priced Too Low. Although the intent of the proposal is to price the contracts so that the net cost to the taxpayers over time is zero, it may not be possible to establish a price for an options contract that would have no present-value cost to the federal government. It would be difficult to determine the correct minimum reservation price for the contracts. Additionally, there is a greater risk that the contracts would be priced too low, rather than too high.

Under H.R. 230, the minimum reservation price—the price below which contracts could not be auctioned—would be based in part on expected industry losses as determined by a federal commission. However, predicting losses from future catastrophes is no simple task. The insurance industry has chronically underestimated the losses from catastrophic events and, as a result, has suffered tremendous financial losses. Catastrophic events are infrequent and past history is an imperfect guide to the future. Indeed, scientists have been revising upwards the estimated frequency of earthquakes and hurricanes. After each major event, the industry has raised its estimate of future losses. CBO cannot conclude that the federal government would perform better than the insurance industry in overcoming these problems in estimating losses and pricing insurance contracts.

Moreover, even if the government were just as likely to set the reservation price too high as too low, the implications for the Treasury would not be symmetric: whereas a low price would encourage the sale of large numbers of XOL contracts and hence a large contingent liability, a high price would hinder sales and possibly yield few if any gains to the Treasury. In principle, bidding in an open auction could drive the prices of the contracts to their actuarially fair value even if the reservation price was set too low. CBO cannot be confident, however, that there would be sufficient demand for the contracts to do so. Of the three factors making up the reservation price, the risk-based component, should it be priced accurately, should cover the long-run actuarial costs of the reinsurance fund. The other factors of the reservation price—the cost-of-capital charge and adjustments for administrative expenses and the mitigation fund—would bring in additional receipts to the federal government, but we do not think these additional charges would be enough to completely

offset possible losses should the risk-based component of the price be set too low. Moreover, the design of the auction, which is not specified in the bill, would have a dramatic impact on the price the government receives.

Payments for Federal Disaster Assistance Would Not Be Reduced Significantly. The combination of the XOL contracts and expanded mitigation efforts proposed under H.R. 230 might reduce other federal payments for disaster assistance, but any potential savings are uncertain and would likely not be significant.

The XOL contracts would reduce private insurers' exposure to risk. If insurers translate this lower risk into either lower premiums or more generous policies, the amount of insurance coverage could expand and fewer people may demand other forms of federal assistance. However, because the lower risk to insurance companies would not necessarily translate into expanded insurance coverage, we cannot assume that any savings would actually result.

In addition, several major federal disaster assistance programs, such as catastrophic crop insurance and disaster relief grants, benefit individuals or organizations that would not be affected by the XOL contracts provision of the bill. For instance, a majority of the Federal Emergency Management Agency (FEMA) disaster relief fund goes for public infrastructure assistance to state and local governments, entities which generally do not carry traditional insurance. In addition, though recent studies have provided evidence that certain mitigation efforts can be cost effective in the long run, the magnitude of any such savings to the federal government remains highly speculative.

Spending Subject to Appropriation

H.R. 230 would authorize additional discretionary spending for administrative expenses for the federal commission, for the natural hazard mitigation program, and for several studies. The bill would authorize the appropriation of $5 million for the initial expenses of the commission. An amount equal to 5 percent of all XOL contract premiums would be authorized for the mitigation program and studies. However, prior to implementation of the bill and receipt of premiums from the XOL contracts, CBO cannot determine how much would be spent on the mitigation program and studies.

PAY-AS-YOU-GO CONSIDERATIONS

The Balanced Budget and Emergency Deficit Control Act of 1985 specifies pay-as-you-go procedures for legislation affecting direct spending or receipts. CBO estimates that enacting

H.R. 230 would increase significantly direct spending by the federal government. Although we cannot estimate the magnitude or timing of spending under this bill, the amounts could total billions of dollars over the 1998-2007 period.

IMPACT ON STATE, LOCAL, AND TRIBAL GOVERNMENTS

H.R. 230 would impose an intergovernmental mandate on state insurance departments by requiring them to use data developed by a federal commission when evaluating the rate filings of private insurers. CBO estimates that the costs of this mandate would not be significant and would not exceed the threshold established in UMRA ($50 million in 1996, adjusted annually for inflation). The bill would also have other impacts—primarily benefits—on state governments, which are described below.

Mandated Use of Commission's Cost Estimates

The bill would establish a national commission to make state-by-state estimates of the probable cost of damages to insured property from natural catastrophes ("loss costs estimates"). Private insurers could choose to cite the commission's estimates when making rate filings with state insurance departments. If an insurer chose to do so, the state would have to accept the loss costs estimates as authoritative. The state could not disapprove the component of the rates that reflects the exposure to catastrophic loss, unless it decided within thirty days that the estimates were excessive, inadequate, or unfairly discriminatory. A state's disapproval would be subject to judicial review in U.S. district court.

Although this provision would affect the information states use to review insurance rates, it would not significantly alter the rate review procedures themselves. Therefore, CBO estimates that the mandate would not impose significant new costs on state governments.

Other Impacts

The bill would establish a new federal trust fund for natural disaster hazard mitigation. This trust fund would receive up to five percent of the proceeds of the sale of the reinsurance contracts, but it could also receive other types of funding. At the beginning of each fiscal year, eligible states would receive money from the trust fund to use for hazard mitigation activities. To become eligible, a state would have to develop a statewide strategic mitigation plan or designate an existing plan. It would then have to get its plan approved by FEMA.

A state desiring continued funding would have to periodically certify to FEMA that it was implementing and updating its plan.

As mentioned above, state insurance pools would be eligible to purchase XOL reinsurance contracts through auctions run by the Department of the Treasury. By purchasing these contracts, states would be able to transfer some of the risk associated with large-scale natural disasters to the federal government.

ESTIMATED IMPACT ON THE PRIVATE SECTOR

This bill would impose no new private-sector mandates as defined in UMRA.

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