

Milliman estimates \$9.3 billion in federal black lung liabilities

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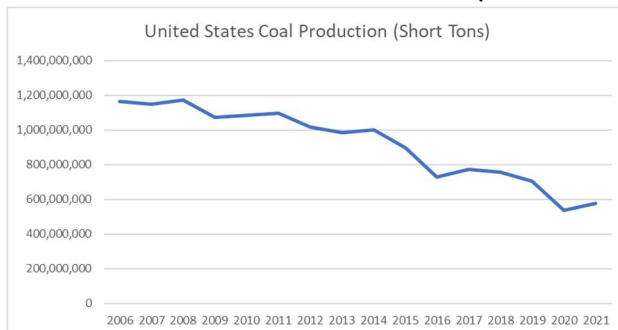
Federal black lung claims are different from other workers' compensation claims because they involve multiple potential payers, undergo a complex adjudication process, and exhibit considerably longer reporting and payment lags. The Government Accountability Office (GAO) has estimated the deficit of the federal government's Black Lung Disability Trust Fund (Trust Fund).¹ To our knowledge, there is no publicly available estimate of the liabilities owed by the other payers: insurance companies and self-insured coal companies. Because of the high severity and the degree of uncertainty associated with these claims, Milliman undertook an in-depth analysis to produce the first-ever estimate of federal black lung liabilities across the entire industry. As of December 31, 2021, the Milliman-estimated non-Trust Fund liabilities totaled approximately \$9.3 billion. Using more pessimistic assumptions, the estimates exceeded \$14.3 billion. A worst-case scenario would be considerably higher.

In this article, we first provide a brief overview of the current outlook for black lung funding in the United States. We then describe how Milliman derived its estimates of non-Trust Fund federal black lung liabilities, identify financial and policy questions surrounding federal black lung claims,² and conclude by describing important historical events related to federal black lung claims.

Understanding the Black Lung Disability Trust Fund deficit

The GAO has studied the deficit of the Trust Fund in an effort to improve the fund's financial position. It has estimated that, under certain scenarios, the Trust Fund's deficit is currently at nearly \$5 billion and could exceed \$15 billion by 2050.³ As the coal industry in the United States continues to shrink and green energy policies emerge, the Trust Fund is threatened by an increase in benefit payments coupled with a decrease in excise tax revenue. The graph in Figure 1 shows the history of annual U.S. coal production. Because coal production has shrunk from nearly 1.2 billion to less than 0.6 billion short tons over the last 15 years,⁴ the excise tax revenue collected by the Trust Fund has fallen proportionally.

FIGURE 1: U.S. COAL PRODUCTION (SHORT TONS)



¹ GAO (June 2019). GAO-19-622T: Financing and Oversight Challenges Are Adversely Affecting the Trust Fund.

² This paper addresses only non-Trust Fund federal black lung claims, and explicitly excludes estimates of state black lung claims.

³ GAO (May 2018). GAO-18-351: Options for Improving Trust Fund Finances.

⁴ From the Mine Safety and Health Administration.

The insolvencies from 2014 to 2016 of Alpha Natural Resources, James River Coal, and Patriot Coal have transferred a total of \$865 million of liabilities to the Trust Fund.⁵ An insolvency creates a large group of potential claimants as mines shut down and miners begin to file claims. Resulting delays can add significantly to inefficiency costs and legal expenses, further stressing the Trust Fund's finances.

In response to the large transfer of liabilities to the Trust Fund, the U.S. Department of Labor (DOL) began a comprehensive self-insured review process in 2019 with the intent of minimizing the likelihood of future transfers of liabilities to the Trust Fund. Companies that cannot meet the requirements of this review are denied the ability to self-insure and are required to purchase commercial insurance coverage, which has become increasingly costly and challenging to find as insurers seek to cut ties with the fossil fuel industry.

As the Trust Fund deficit increases, continued appropriations from the U.S. Department of the Treasury's general fund may remain necessary and the Trust Fund's debt will ultimately become the responsibility of taxpayers. In order to make crucial decisions about the funding and fate of the Trust Fund, we must first understand the magnitude and timing of the total federal black lung liabilities. To that end, Milliman conducted this study of the total non-Trust Fund federal black lung claim liabilities stemming from insurers and self-insureds as of December 31, 2021.

Milliman's estimates of non-Trust Fund federal black lung liabilities

Approach

Our estimate of the total industry insured and self-insured federal black lung liabilities was based on data from the DOL's black lung claim database as of December 31, 2021. This database provides claim detail by filing (i.e., claimants will have multiple records if they have filed multiple times). We used the filing level detail and applied Milliman's proprietary black lung claim reserving model and actuarial methodologies to project future entitled black lung claims and the costs associated with those claims for all current and future claimants and their dependents. Our unpaid claim liability estimates were prepared on an undiscounted basis.

Federal black lung liability payments are comprised of indemnity benefits, medical payments, and expenses, which include legal and claim-handling costs. The payout of indemnity and medical benefits for federal black lung liabilities is similar in structure to life annuities and was modeled as such. We used claimant age, federal adjudication status level, and mortality tables to project the future payments for each open claimant in the DOL database. Every year, Congress sets indemnity benefit rates in accordance with Section 412(a)(1) of the Federal Coal Mine Health and Safety Act of 1969 (Coal Act). The Coal Act also details the medical costs associated with procedures such as lung exams, inhalers, oxygen, pulmonary rehab, and, for some rare cases, lung transplants that are the responsibility of those liable for federal black lung claim entitlements. Unlike traditional workers' compensation, where the majority of long-tailed liabilities result from medical payments (for example lifetime care costs), as indemnity benefits are either settled or are capped by statutory limits, black lung reserving requires projecting both indemnity and medical benefits for the life of the miner as settlements have not historically been allowed by the DOL. Additionally, indemnity benefits must also be projected for the life of a miner's dependents. Because of this, over half of the projected federal black lung liabilities in our study consist of indemnity benefits. The final cost component of black lung claims is expense costs. We selected yearly medical expense payments and average legal defense expenses per claimant based on data gathered by Milliman. Future yearly indemnity and medical payments were escalated at selected annual inflation rates based on historical indemnity benefit levels and industry medical payment data.

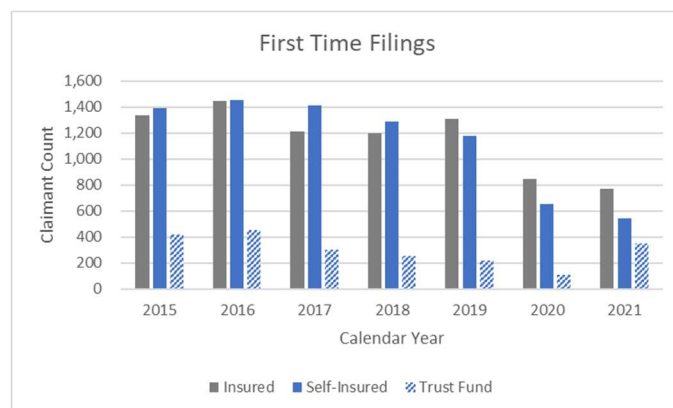
⁵ GAO (February 2020). GAO-20-21: Improved Oversight of Coal Mine Operator Insurance Is Needed.

Future considerations

In 2010, there were approximately 91,000 coal miners actively working in the United States. By 2021, that number had decreased to nearly 42,000.⁶ As the population of working coal miners decreases because of the shift away from fossil fuels, excise tax revenue will continue to fall; the number of claimants receiving benefits, however, will not be shrinking at the same rate. There is no statute of limitations on when a miner can file nor any limit to the number of times a miner can file a federal black lung claim. These unique characteristics create a significant lag between the time miners leave the workforce and when filed claims ultimately close. An increase in miners leaving the industry and filing for benefits, along with lower profits from coal mine operations, will likely cause self-insured coal mine operators to struggle to pay black lung benefits to their former mining employees. Even for those corporations that are currently financially stable, the DOL's lengthy and selective self-insurance qualification process, coupled with the difficulty in securing commercial insurance for federal black lung liabilities, makes the future funding of the liabilities highly uncertain.

To further complicate insuring coal operations, Travelers and AIG have recently joined over 35 other insurers that have made pledges to divest from the fossil fuel industry. This may motivate companies that have been purchasing commercial insurance to self-insure instead. Our estimate of the non-Trust Fund liabilities shows the volume of potential transfers to the Trust Fund—if insurance companies and self-insured coal mine operators are unable to pay benefits after becoming insolvent—impacting not only insurance companies, coal operators, and coal miners, but taxpayers as well. The graph in Figure 2 displays newly filed claimants by the type of entity that is responsible for their claims.

FIGURE 2: FIRST-TIME FILINGS



Just as recently as March 2022, the West Virginia House of Representatives passed Senate Bill 1 (SB1), which provides a \$50 million no-interest loan from the Secretary of the West Virginia Department of Environmental Protection for a newly formed mining mutual insurance company, set up to provide reclamation insurance to reduce the impact of insolvencies on the state's mine cleanup fund. At this time, those looking to insure their black lung liabilities may also benefit from alternative insurance financing options; this includes the federal government, which also has an interest in the ability of mining companies to secure black lung insurance to reduce the impact of insolvencies on the Trust Fund. Recently, West Virginia Senator Joe Manchin III controversially withdrew his support from President Biden's Build Back

⁶ From the Mine Safety and Health Administration.

Better agenda, which would have restored the mining excise tax rates from \$0.50 and \$0.25 per ton to the 2021 rates of \$1.10 and \$0.55 per ton for underground and surface coal, respectively.⁷ These bills and other government initiatives continue to place black lung legislation in the news as a priority for the industry to monitor and to understand the potential consequences of retaining the status quo.

History of federal black lung benefits

The first federal program to compensate coal miners disabled as a result of coal workers' pneumoconiosis (CWP), or black lung disease, began with the Coal Act. This program enforced safety protections for miners, with the Social Security Administration initially responsible for providing the black lung benefit payments to miners and their dependents. The Coal Act was later amended by the Black Lung Benefits Act of 1972, which made the coal mine operator where the miner last worked responsible for payment of black lung benefits. These "responsible operators" (ROs) were required to provide benefits either through purchasing insurance coverage or—if approved by the DOL—by self-insuring. If the RO was no longer in business or otherwise unable to pay benefits, the federal government would assume responsibility for the benefit payments.

Federal black lung benefits were initially paid out of general revenue, in accordance with Part C of the Coal Act. Later, Congress created the Trust Fund with the passage of the Black Lung Benefits Revenue Act of 1977. The Trust Fund was originally financed by charging an excise coal tax on mining operations (and remains this way today). In this way, the intent of the Trust Fund was to shift the fiscal responsibility for black lung benefits from the federal government to the coal industry. However, as more coal companies left the industry the Trust Fund started operating at a deficit, and relied upon borrowing from the U.S. Department of Treasury's general fund to make benefit payments.

Presumptions: (medical and employment)

The presumptions and criteria for a miner to receive an award for federal black lung benefits have been amended several times since the inception of the black lung program. An award or entitlement of CWP through the federal black lung program has primarily been based on medical evidence of black lung disease and the number of years employed as a coal miner. However, the medical evidence can become convoluted depending on the awarded diagnosis and the shift in burden from the miner to the RO of proving black lung was related to coal mine employment.

Medical presumptions

Black lung is an occupational disease that develops from inhaling particles of coal dust into the lungs. Over time, continued exposure to the coal dust causes scarring in the lungs, impairing the ability to breathe. The severity of scarring seen through a diagnostic scan of the lungs determines the medical diagnosis, which can be separated into two types: Simple and Complicated CWP. In Simple CWP, a chest X-ray or CT scan will reveal small amounts of scar tissue, with tiny, circular nodules on the lungs. Complicated CWP, also referred to as progressive massive fibrosis, reveals more severe scarring over a larger area of the lung tissue. These two diagnoses are listed as clinical definitions per the black lung program, with a legal definition of CWP included in 2001. Legal CWP *includes any chronic lung disease or impairment and its sequelae arising out of coal mine employment. This definition includes, but is not limited to, any chronic restrictive or obstructive pulmonary disease arising out of coal mine employment.*⁸ Because the definition of legal CWP includes chronic obstructive pulmonary disease (COPD), miners who have smoked cigarettes

⁷ New York Times (January 10, 2022). Manchin's Choice on Build Back Better: Mine Workers or Mine Owners. Retrieved May 12, 2022, from <https://www.nytimes.com/2022/01/10/us/politics/manchin-coal-miners.html>.

⁸ Federal Coal Mine Health and Safety Act of 1969, Pub. L. No. 91-173 § 402(b) (1969).

for many years qualify for federal black lung benefits. This definition also deemed CWP as latent and progressive, meaning there is a presumption that lung disease will worsen and develop years after coal dust exposure has ceased. The controversy in this definition, however, is that medical experts believe Complicated CWP is progressive and Simple CWP is not, yet both render a miner eligible for federal black lung benefits.

Employment presumptions

With an amendment to the Coal Act in 1981, a miner employed for 15 years or more in the coal mines was required to prove that black lung was caused by exposure to coal dust. The passing of the Byrd Amendment, which was part of the Patient Protection and Affordable Care Act, in 2010 shifted this burden of proof from the miner to the responsible operator, qualifying any miner working for at least 15 years in the mines to federal black lung benefits. With typical workers' compensation programs, the burden of proof is on the claimant to show that disability resulted from a work-related injury; the shift of the burden of proof makes federal black lung claims difficult to defend even in cases where the miner has a smoking-related disease and not CWP.