



COMPLETE ACTUARIAL  
SOLUTIONS COMPANY

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## What If Inflation Rears Its Ugly Head?

Concerns about a rise in inflation persist. You only need to look at the core CPI, which excludes volatile energy and food prices, to see that inflation is a very real issue. This measure was up 0.3% in May, its largest increase since July 2008. At the same time, corporations are sitting on record amounts of cash and ready to deploy capital.

As concerns about high unemployment, slower than expected GDP growth and a possible "double-dip" recession mount, the Fed has made it clear that inflation is very much its secondary worry and continues to pump liquidity into the economy through purchasing government debt and maintaining low interest rates. This uncertainty is enough to make actuaries scratch their heads.

Meanwhile, our actuarial crystal ball keeps flashing the following warning: "Make sure clients understand how increased inflation impacts their balance sheet, given that they have been managing their insurance programs in a low inflation environment for so many years."

A balance sheet is a comparison of the projected current value of assets and liabilities. A typical insurance program relying on alternative risk financing such as a self-insurance fund, a captive insurer, or a risk retention group is operated in a way

to maintain its surplus position in a range which minimizes volatility in funding over the long term. The lower end of the surplus range is intended to guard against potential adverse loss experience. The upper end of the range is managed to guard against unreasonable accumulation of assets in the program to the detriment of better investment opportunities.

A sustained rise in inflation slices the GAAP surplus position of an insurance program like a double-edged sword. It lowers the valuation of the assets typically invested in fixed-income notes. At the same time, it inflates the valuation of the liabilities as it increases future costs associated with open and incurred but not reported (IBNR) claims. This leveraging effect increases as the duration of liabilities and fixed-income assets increases.

As a demonstration, let us assume the Well Funded Captive Insurance Company (WFCIC) writes workers' compensation insurance. As reflected in the balance sheet on the next page, a sustained rise in inflation will have a leveraged effect on WFCIC's projected surplus, with a 1% higher than expected rate of inflation reducing surplus by 20% and a 2% higher than expected rate reducing surplus by 40%.

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## What If Inflation Rears Its Ugly Head? (continued)

WFCIC Balance Sheet

	Rate of Inflation		
	Expected Inflation Level	1% Higher than Expected	2% Higher than Expected
<b>Assets</b>			
Cash	\$ 1,000,000	\$ 1,000,000	\$ 1,000,000
Fixed-Income Notes a/	4,000,000	3,885,759	3,775,869
<b>Total</b>	<b>\$ 5,000,000</b>	<b>\$ 4,885,759</b>	<b>\$ 4,775,869</b>
<b>Liabilities</b>			
Workers' Compensation Liabilities	\$ 3,482,000	\$ 3,667,000	\$ 3,861,000
Surplus	1,518,000	1,218,759	914,869
<b>Total</b>	<b>\$ 5,000,000</b>	<b>\$ 4,885,759</b>	<b>\$ 4,775,869</b>
Change in Surplus vs. Expected Inflation Level		<b>-20%</b>	<b>-40%</b>

a/ A three year duration treasury bond.

In light of the significant impact of a sustained rise in inflation on the balance sheet, insurance program managers should discuss the following action steps with their service providers, including investment managers, brokers, actuaries, and claims administrators:

- Review investment strategy regarding duration and sensitivity to increased inflation.
- Examine claim settlement philosophy. Settling claims quicker reduces the impact of increased inflation.
- Review the inflation sensitivity of upcoming structured settlements.
- Analyze the impact of potential increases in discount factors on liabilities and future funding.
- Consider funding and reserving at a higher confidence level if you want to be one step ahead.
- Consider further capital contribution or changes to dividend policy in case the surplus position of the program is in danger of falling below the safety margin required to guard against adverse experience.
- Monitor the impact on the financial strength of the program's insurers/reinsurers and the future availability of coverage under the desired terms and limits.

Whether sustained inflation is around the corner or further down the road, there is no denying that the risk is real and the adverse impact on insurance programs could be significant and should be planned for.