



NEPC, LLC

To: Cash Management Policy Board

From: John Krimmel, Partner and Jennifer Appel, Research Consultant

Date: August 14, 2020

Subject: Delaware Budget Stabilization Account Reserve Analysis

Background

NEPC was asked to prepare an analysis for the Delaware Budget Stabilization Reserve Account to ensure that an adequate reserve or cushion above the statutorily required amount was maintained. This is the initial analysis conducted on the Budget Stabilization Account and the minimum amount required to be maintained in the account (before reserve) for Fiscal Year 2021 is \$63,100,000.

Our analysis is prepared using the same framework used for the Budget Reserve Account (Rainy Day Fund). This utilizes an interest rate shock analysis prepared by BlackRock and an NEPC prepared analysis that considered increases in interest rates and other market stresses. The results of these separate analyses are presented in the following section and result in a recommendation for consideration by the Cash Management Policy Board.

Analysis

BlackRock prepared the following analysis of the reserve based upon interest rate increases of 0.25%, 0.50%, and 1.00%.

Impact of Rate Changes on BlackRock Reserve Portfolio
(and pro-rated impact on Budget Stabilization Amount)

As of June 30, 2020

Entire Portfolio		Budget Stabilization Portion	% of Total
Market Value	\$ 487,746,002	\$ 63,100,000	12.94%
Duration	2.45	1.69	
Interest Rate Shock (bps)			
25	\$ (2,700,000)	\$ (349,301)	
50	\$ (5,400,000)	\$ (698,601)	
100	\$ (11,200,000)	\$ (1,448,951)	



NEPC conducted a second analysis using BlackRock’s historical volatility (standard deviation) and NEPC’s 2020 Capital Market Assumptions to determine expected volatility and confidence intervals. The analysis, presented below, mirrors the BlackRock analysis in that the first result (labeled “Gross Decline”) presents the immediate results of a market shock and the second result (labeled “Net Decline”) presents the results (gain or loss) one-year forward.

State of Delaware
Budget Stabilization Account
Data as of June 30, 2020

Required Balance \$63,100,000

	<u>Return</u>	<u>Volatility</u>	Gross Decline with a		
			<u>1 SD Event</u>	<u>2 SD Event</u>	<u>3 SD Event</u>
BlackRock	4.77%	1.42%	\$ (896,020)	\$ (1,792,040)	\$ (2,688,060)
NEPC Capital Market Assumptions	1.22%	2.76%	\$ (1,741,560)	\$ (3,483,120)	\$ (5,224,680)

	<u>Return</u>	<u>Volatility</u>	Net Decline with a		
			<u>1 SD Event</u>	<u>2 SD Event</u>	<u>3 SD Event</u>
BlackRock Actual (Since Inception)	4.77%	1.42%	\$ (675,170)	\$ (1,571,190)	\$ (2,467,210)
NEPC Capital Market Assumptions	1.22%	2.76%	\$ (1,520,710)	\$ (3,262,270)	\$ (5,003,830)

Net Decline is a 1-year forward looking decline assuming the portfolio earns a 0.35% yield.

The table below summarizes the results of the two analyses. Consistent with the methodology for the Budget Reserve Analysis, we utilized BlackRock’s historical volatility, the 1-standard deviation (Net Decline) event, which corresponds roughly with the 0.50% interest rate increase (instantaneous), while the 2-standard deviation event corresponds roughly with a 1.00% increase.

State of Delaware
Budget Stabilization Account
Comparative Analysis

	<u>25 bps</u>	<u>50 bps</u>	<u>100 bps</u>
BlackRock Results	\$ (349,301)	\$ (698,601)	\$ (1,448,951)
	<u>1 SD Event</u>	<u>2 SD Event</u>	<u>3 SD Event</u>
NEPC Gross Decline	\$ (896,020)	\$ (1,792,040)	\$ (2,688,060)
NEPC Net Decline	\$ (675,170)	\$ (1,571,190)	\$ (2,467,210)

In recent meetings with BlackRock and other fixed income investment managers, the consensus outlook is that interest rates will likely remain unchanged during the remainder of fiscal year 2021. Further, the market, as of August 1, 2020, has not priced in any material short-term interest rate changes by the Federal Reserve over the remainder of Fiscal Year 2021.



Summary & Recommendation

In summary, both the BlackRock and NEPC analyses indicate that a \$1,500,000 reserve or cushion in Delaware's Budget Stabilization account can withstand a 1.00% rise in interest rates or a 2-standard deviation event.

Based on the result of these analyses, and the market's expectations of no material changes in short-term interest rates, we believe that the Delaware Budget Stabilization Account's reserve of \$1,500,000 is adequate to ensure that the minimum balance of \$63,100,000 is maintained.

We look forward to discussing the analysis with the Cash Management Policy Board on Wednesday, August 26, 2020.