

1 **Q. Reference Evidence of Laurence Booth dated September 25, 2018**

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3 **Page 2, lines 32-35: Please explain what Dr. Booth’s “misgivings” are**  
4 **concerning the recommended ROE of 7.5% and how they influenced his**  
5 **recommendations for ROE.**

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7 **A. In 2016 on page 2 of my Executive Summary I stated**

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30 6) For 2016 I continue to recommend an ROE of 7.50% for a benchmark utility since  
31 forecast long Canada bond yields have yet to hit the trigger of 3.8%, which I currently regard  
32 as a minimum for setting fair rates of return. I recommend that this ROE be set for a three  
33 year period, since I do not see the forecast long Canada bond yield hitting this 3.8% trigger.

At that time, RBC’s forecast long Canada bond yield was 3.65. The main reason for this recommendation was the huge bond buying programs by central banks that had taken trillions off the bond market where otherwise bond yields would have been much higher. The following table is from a Bank of Canada publication<sup>1</sup> and essentially indicates that the US Fed had purchased 18%-28% of the outstanding target markets, the Bank of England 32%, the Bank of Japan 36%, and the European Central bank 21%.

**Table 1: Central bank holdings of government debt as a share of total outstanding**

As at 2015Q4		Total outstanding (in billions, domestic currency)	Central bank holdings	
			Amount (in billions, domestic currency)	As a share of total outstanding (in per cent)
United States	Marketable government debt held by the public (Treasuries) <sup>a</sup>	13,422	2,461	18
	Agency debt and mortgage-backed securities	6,470	1,780	28
United Kingdom	Government bonds denominated in pounds sterling (Gilts) <sup>a</sup>	1,220	385	32
Japan	Japanese government bonds	902,201	325,002	36
Euro area	Government debt securities denominated in euros	7,421	1,562 <sup>b</sup>	21
Sweden	Swedish nominal government debt securities denominated in Swedish krona	992	166	17

a. As at 2016Q1

b. National central bank holdings of general government debt plus ECB holdings under its asset purchase programs including the Covered bond purchase programmes 1-3, the Asset-backed securities purchase programme, the public sector purchase programme, and the Securities Markets Programme.

Sources: International Monetary Fund—International Financial Statistics, US Treasury, US Federal Reserve Board, UK Debt Management Office, Bank of England, Ministry of Finance Japan, Bank of Japan, European Central Bank, and Sveriges Riksbank

<sup>1</sup> Eric Santor and Lena Suchanek, A new era in central banking: unconventional monetary policy, Bank of Canada Review, Spring 2016.

1 I concluded at that time (page 26)

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11 What is important to note is that interest rates are not, and probably will not for the foreseeable  
12 future, be set by private investors. Instead, they are being set by what has been termed the  
13 “global policy maker.” As a result, forecasting interest rates for a small country like Canada in a  
14 global financial system depends critically on central bank decisions elsewhere.

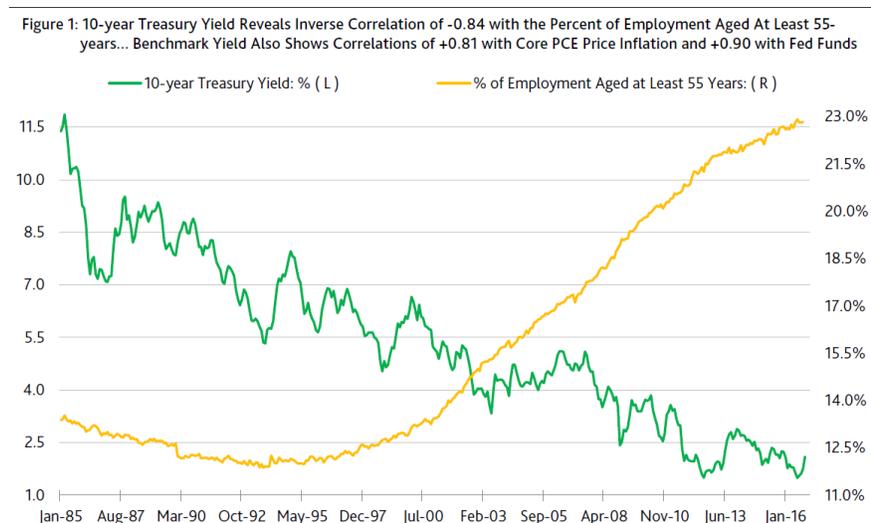
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4 Since 2016 these bond-buying programs have decreased in importance, while policy rates have  
5 increased in both the U.S and Canada. Yet instead of increasing to the 3.65% level forecast by  
6 RBC in 2016, RBC now forecasts the long Canada bond yield to increase to only 3.0%!

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8 This has led economists to consider whether there are other underlying factors keeping long-term  
9 interest rates low, apart from the dominant impact of central bank bond buying programs.  
10 Moody’s, for example, produced the following chart:

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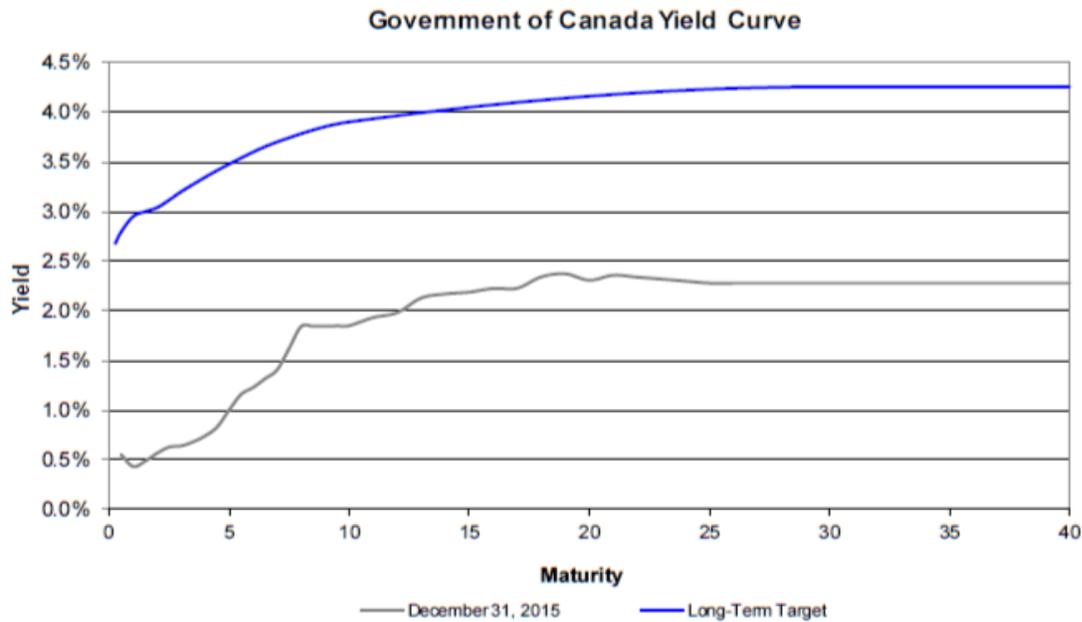


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13 There is a clear correlation between the level of the yield on the 10 year US Treasury Bond and  
14 the percentage of employment over the age of 55. This has increased due to baby-boomers  
15 moving into their peak savings period. Although correlation does not mean causation, part of the  
16 low level of long-term bond yields may be due to these demographic changes. As a boomer  
17 myself this argument resonates even though I think it is not as important as the impact of central  
18 bank bond buying programs.

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20 In 2016, NP provided the AON-Hewitt and Mercer Canadian forecasts in answer to CA-NP-269.  
21 Of importance was the graph on page 8 reproduced below from Mercer.



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 2 Mercer saw the long run or target yield curve having a long Canada bond yield of 4.25%. This  
 3 was well above the actual yield curve at the time, but consistent with my use of a 3.8% forecast  
 4 LTC yield as a trigger. Given the significant changes in the yield curve since 2016 and the  
 5 decrease in forecast LTC yields, I asked for current copies of these reports. This was to check  
 6 whether either Mercer or AON-Hewitt had lowered their estimates of the long run Canada yield  
 7 curve, but they were not provided. However, I suspect that the long run yield curve has partly  
 8 decreased due to these demographic changes, so I have some misgivings about continuing to  
 9 support a minimum ROE of 7.5%.

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 11 These misgivings have recently been strengthened by the stock market sell off on October 10-11,  
 12 2018 with one main cause being the increase in the US ten-year treasury yield and President  
 13 Trump blaming the Federal Reserve for the slump. This may indicate increasing political  
 14 pressure to keep long-term interest rates abnormally low.