

Montgomery County Government Post-Employment Medical Benefits

GASB 74 Actuarial Information for the Year Ending June 30, 2020



Submitted by:
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September 23, 2020

Kay Russell Deerin Group Insurance Fund Manager Office of Human Resources 101 Monroe Street, 12th Floor, Room 1209 Rockville, MD 20850

Dear Kay:

The following report contains the GASB 74 plan accounting actuarial information for the post-employment benefits (OPEB) to be included with the Montgomery County Government's financial statements. The GASB 74 reporting is for fiscal year ending in 2020. The measurement date as required by GASB 74 is June 30, 2020.

Methodology, Reliance and Certification

This report is prepared for the Montgomery County Government (the Government). The report contains the actuarial information to be included with the Government's financial statements (the Government's fiscal year end date) as required by GASB 74. This information has been prepared for use in the financial statements of the Government. This information is not intended for, nor should it be used for, any additional purposes.

Under GASB 74, the measurement date if required to be at the end of the fiscal year or June 30, 2020 for the FYE 2020 disclosure. The December 2019 Federal appropriations bill eliminated the excise tax on high-cost plans that was part of the Affordable Care Act (this excise tax is commonly referred to as the "Cadillac Tax"). It is our understanding from the Standard that the disclosure should be "in accordance with the benefit terms and any additional legal agreements to provide benefits that are in force at the measurement date". Accordingly, we have adjusted the results to show the impact of the elimination of the excise tax which was signed into law before the measurement date.

The total OPEB liability is based on July 1, 2019 valuation data rolled forward to June 30, 2020. The methods, assumptions, participant data, and plan provisions are detailed in the FYE 2020 and FYE 2021 Actuarial Valuation report dated October 11, 2019 except as noted below.

- The discount rate used to determine the liabilities under GASB 74 was lowered to 5.68% because, under the GASB 74 methodology, it was determined that the fund will remain solvent until 2063. Benefit payments for the Plan were discounted based on an index rate for 20-year tax exempt general obligation municipal bonds with an average rating of AA/Aa or higher (2.45%) for years when the projected benefit payouts are expected to be unfunded and 7.50% for years when the projected benefit payouts are expected to be funded. Please refer to Appendix B for the derivation of the discount rate.
- The trend rates were adjusted to remove the Cadillac tax that was repealed in December 2019
- The calculations are based on the Entry Age Normal actuarial cost method as required by GASB 74.
- The subsidy percentage for 527 retirees that had been unintentionally misreported on the valuation data file was amended to include the correct retiree contribution percentage.



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Methodology, Reliance and Certification

Because the net impact of COVID-19 on health costs and changes in turnover and retirement behavior is not possible to estimate at this time, we have made no adjustments to any of the assumptions selected before the COVID-19 pandemic.

The included calculations assume that the members and the Government will continue to make all required actuarially determined contributions. Based on that assumption, the plan's fiduciary net position is expected to be available to make all future benefit payments until 2063.

The long-term nominal expected rate of return on OPEB plan investments was determined using a building-block method where return expectations are established for each asset class. The building-block approach uses the current underlying fundamentals, not historical returns. For example, spread and the risk-free rate are used for fixed income; and dividends, earnings growth and valuation are used for equity. These return expectations are weighted based on asset/target amounts. The investment returns by investment class and the plan's asset investment policy were provided by the Government.

Future medical care cost increase rates are unpredictable and could be volatile. They will depend upon the economy, future health care delivery systems and emerging technologies. The trend rate selected is based on an economic model developed by a health care economist for the Society of Actuaries. Future medical trend increases could vary significantly from the model. Model inputs will be updated periodically based on the best estimate of the economy at that time. The sensitivity of results to a 1% increase or decrease in assumed trend is shown in this report.

This is a deterministic valuation in that it is based on a single set of assumptions. This set of assumptions is one possible basis for our calculations. Other assumptions may be equally valid. The future is uncertain, and the plan's actual experience will differ from the assumptions; the differences may be significant or material because the results are very sensitive to the assumptions made and, in some cases, to the interaction between the assumptions. We may consider that some factors are not material to the valuation of the plan and may not provide a specific assumption for those factors. We may have used other assumptions in the past. We will likely consider changes in assumptions at a future date.

The Government is responsible for selecting the plan's funding policy and assumptions. The policies, methods and assumptions used in this valuation are those that have been so prescribed and are described in the FYE 2020 and FYE 2021 Actuarial Valuation report dated October 11, 2019. The Government is solely responsible for communicating to Bolton Partners, Inc. any changes required thereto.

This report is based on plan provisions, census data, and claims data submitted by the Government and their providers. We have relied on this information for purposes of preparing this report but have not performed an audit. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information. The plan sponsor is solely responsible for the validity and completeness of this information.



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Methodology, Reliance and Certification

The Government is solely responsible for selecting the plan's investment policies, asset allocations and individual investments. Bolton, Inc.'s actuaries have not provided any investment advice to the Government.

The information in this report was prepared for the internal use of the Government, the plan and their auditors in connection with our actuarial valuations of the OPEB plan as required by GASB 75.

This report may not be used for any other purpose; Bolton Partners, Inc. is not responsible for the consequences of any unauthorized use or the reliance on this information by any other party.

We make every effort to ensure that our calculations are accurately performed. These calculations are complex. Despite our best efforts, we may make a mistake. We reserve the right to correct any potential errors by amending the results of this report or by including the corrections in a future valuation report.

This report provides certain financial calculations for use by the auditor. These values have been computed in accordance with our understanding of generally accepted actuarial principles and practices and fairly reflect the actuarial position of the plan. The various actuarial assumptions and methods which have been used are, in our opinion, appropriate for the purposes of this report.

The report is conditioned on the assumption of an ongoing plan and is not meant to present the actuarial position of the plan in the case of plan termination. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status), and changes in plan provisions or applicable law.

Bolton Partners is completely independent of Montgomery County Government, its programs, activities, its officers, and key personnel. Bolton Partners, and anyone closely associated with us, does not have any relationship which would impair or appear to impair our objectivity on this assignment.

The undersigned credentialed actuary meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The FYE 2020 and FYE 2021 Actuarial Valuation report dated October 11, 2019 contains information that is integral to the results contained herein and a copy may be provided upon request.

Respectfully submitted,

Kevin Binder, FSA, EA

Mark Lynne, CEBS





Change in Net OPEB Liability

	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)
Balance as of June 30, 2019 for FYE 2019	\$1,407,188,030	\$553,755,856	\$853,432,174
Changes for the Year			
Service Cost	50,603,665		50,603,665
Interest	84,115,630		84,115,630
Changes of Benefit Terms	0		0
Experience Losses/(Gains)	76,398,324		76,398,324
Trust Contribution - Employer		88,939,381	(88,939,381)
Net Investment Income		33,971,605	(33,971,605)
Changes in Assumptions	69,533,390		69,533,390
Benefit Payments (net of retiree contributions)	(55,773,063)	(55,773,063)	0
Administrative Expense		(341,413)	341,413
Net Changes	224,877,946	66,796,510	158,081,436
Balance as of June 30, 2020 for FYE 2020	\$1,632,065,976	\$620,552,366	\$1,011,513,610
Funded status		38.02%	



Sensitivity of Total and Net OPEB Liability - Required by GASB 74

The following table presents Montgomery County Government's Total and Net OPEB liability. We also present the Total and Net OPEB liability if it is calculated using a discount rate that is 1 percentage point lower or 1 percentage point higher.

Discount Rate	1% Decrease 4.68%	Discount Rate 5.68%	1% Increase 6.68%
Total OPEB Liability	\$1,867,806,086	\$1,632,065,976	\$1,439,978,593
Net OPEB Liability/(Asset)	\$1,247,253,720	\$1,011,513,610	\$819,426,227

The following table presents Montgomery County Government's Total and Net OPEB liability. We also present the Total and Net OPEB liability if it is calculated using a health care cost trend rate that is 1 percentage point lower or 1 percentage point higher.

	1% Decrease	Medical Trend	1% Increase
Ultimate Trend	2.68%	3.68%	4.68%
Total OPEB Liability	\$1,418,809,342	\$1,632,065,976	\$1,900,365,464
Net OPEB Liability/(Asset)	\$798,256,976	\$1,011,513,610	\$1,279,813,098



Schedule of Changes in the Total Liability and Related Ratios - Required by GASB 74

Changes in Employer's Net OPEB Liability and Related Ratios

Last 10 Fiscal Years

Disclosure for fiscal year ending: Measurement Date:	2020 6/30/2020	2019 6/30/2019	2018 6/30/2018	2017 6/30/2017	2016 6/30/2016	2015 6/30/2015	2014 6/30/2014	2013 6/30/2013	2012 6/30/2012	2011 6/30/2011
Total OPEB liability										
Service Cost	\$ 50,603,665	\$ 70,518,206	\$ 65,155,686	\$ 73,126,875						
Interest Cost	84,115,630	111,580,719	117,685,710	116,270,504						
Changes in Benefit Terms	-	-	-	-						
Differences Between Expected and Actual Experience	76,398,324	(351,021,508)	(1,877,264)	(22,113,781)						
Changes of Assumptions	69,533,390	(191,917,617)	(268,604,422)	(261,363,550)		Information	for FYE 2017			
Benefit Payments	(55,773,063)	(55,114,260)	(50,319,668)	(56,938,631)		and earlier is	not available			
Net Change in Total OPEB Liability	224,877,946	(415,954,460)	(137,959,958)	(151,018,583)						
Total OPEB liability - Beginning of Year	1,407,188,030	1,823,142,490	1,961,102,448	2,112,121,031						
Total OPEB Liability - End of Year	1,632,065,976	1,407,188,030	1,823,142,490	1,961,102,448						

Plan Fiduciary Net Position

Last 10 Fiscal Years

Disclosure for fiscal year ending: Measurement Date:	2020 6/30/2020	2019 6/30/2019	2018 6/30/2018	2017 6/30/2017	2016 6/30/2016	2015 6/30/2015	2014 6/30/2014	2013 6/30/2013	2012 6/30/2012	2011 6/30/2011
Contributions - Employer	\$ 88,939,381	\$ 77,208,188	\$ 63,725,810	\$ 122,466,187						
Net Investment Income	33,971,605	39,922,676	40,066,004	42,759,085						
Benefit Payments (net of retiree contributions)	(55,773,063)	(55,114,260)	(50,319,668)	(56,938,631)		Information for FY	'E 2017			
Administrative Expense	(341,413)	(339,355)	(276,553)	(4,292,538)		and earlier is not	available			
Net Change in Fiduciary Net Position	66,796,510	61,677,249	53,195,593	103,994,103						
Fiduciary Net Position - Beginning of Year	553,755,856	492,078,607	438,883,014	334,888,911						
Fiduciary Net Position - End of Year	620,552,366	553,755,856	492,078,607	438,883,014						
Net OPEB Liability	1,011,513,610	853,432,174	1,331,063,883	1,522,219,434						
Fiduciary Net Position as a % of Total OPEB Liability	38.02%	39.35%	26.99%	22.38%						
Covered-Employee Payroll ¹	\$ 803,597,000	\$ 785,379,904	\$ 766,111,522	\$ 750,986,381						
Net OPEB Liability as a % of Payroll ¹	125.87%	108.66%	173.74%	202.70%						
Expected Average Remaining Service Years of All Participants	6.63	6.63	7.06	7.63						

Notes to Schedule:

Benefit changes:

Changes of assumptions:

6.10% The discount rate was changed as follows ==> 5.68% 6.26% 5.88%

The December 2019 Federal appropriations bill eliminated the excise tax on high-cost plans that was part of the Affordable Care Act (this excise tax is commonly referred to as the "Cadillac Tax"). Accordingly, we have removed the Cadillac Tax from the trend assumption.

The subsidy percentage for 527 retirees that had been unintentionally misreported on the valuation data file used to calculate the liabilities for the FYE 2019 GASB 74 and FYE 2020 GASB 75 disclosures



Schedule of Changes in the Actuarially Determined Contribution and Related Ratios - Required by GASB 74

Schedule of Employer Contributions

Last 10 Fiscal Years

	2020	2019	2018	20 [.]	7 201	6 2015	2014	2013	2012	2011	
Actuarially determined contribution	\$ 72,150,000	\$ 116,737,000	\$ 117,474,000	\$ 112,702,00)						
Contributions in relation to the actuarially determined contribution	88,939,381	77,208,188	63,725,810	122,466,18	<u>7</u>	Information for FYE 2017 and earlier is not available					
Contribution deficiency (excess)	\$ (16,789,381)	\$ 39,528,812	\$ 53,748,190	\$ (9,764,18	7)						
Covered-employee payroll ¹	\$ 803,597,000	\$ 785,379,904	\$ 766,111,522	\$ 750,986,38	1						
Contributions as a percentage of covered employee payroll ¹	11.07%	9.83%	8.32%	16.31	%						

Notes to Schedule

Benefit changes None.
Valuation date 7/1/2019

Changes of assumptions The trend table was updated to the SOA long-term trend model as described below

The salary scale and inflation assumptions were updated to reflect the proposed changes summarized in the 2019 Montgomery County

Employees' Retirement System experience study

The Retirement, Termination, Disability, and Mortality assumptions were updated to reflect the proposed changes summarized in the 2019

Montgomery County Employees' Retirement System experience study

Methods and assumptions used to determine contribution rates:

Valuation Date 7/1/2019

Actuarial cost method Projected Unit Credit
Amortization method Level percent of payroll
Remaining amortization period 30 Year open
Asset valuation method Market value of assets

Investment rate of return 7.50

Payroll growth rate Vary based on participant group and service. Increases start between 7.25% and 11.25% at hire and decrease to 3.50% after 20 years of service.

Inflation 3.0

Mortality For healthy retirees and beneficiaries - PUB-2010 Healthy Mortality, Headcount weighted Sex Distinct, Fully Generational projected from 2010 using scale MP-2018.

Public safety employees are assumed to use the public safety version of the mortality table and the rest of the employees are assumed to use the general

employees version of the mortality table.

For disabled retirees - PUB-2010 Disabled Mortality, Headcount weighted Sex Distinct, Fully Generational projected from 2010 using scale MP-2018. Public safety employees are assumed to use the public safety version of the mortality table and the rest of the employees are assumed to use the general employees

version of the mortality table

Healthcare cost trend rate The medical trend assumption was developed using the Society of Actuaries (SOA) Long-Run Medical Cost Trend Model, version 2019_b. The SOA model is

flexible and allows for adjustments that ultimately control how quickly the current trend converges to the percentage increase in the GDP. Montgomery County

has selected the following assumptions were used as input variables into the SOA model:

Rate of Inflation	2.40%
Rate of Growth in Real Income / GDP per capita	1.25%
Excess Medical Growth	1.20%
Expected Health Share of GDP in 2028	20.50%
Health Share of GDP Resistance Point	15.00%
Year for Limiting Cost Growth to GDP Growth	2040

The initial trend rate is 5.40% in 2020 and decreases until reaching the ultimate rate of 3.68% in 2040.

The dental trend is set to 4.50% per year.

The actuarially determined contribution and contributions in relation to the actuarially determined contribution are provided as of the measurement date. For example, the FYE 2020 disclosure (using a measurement date of 06/30/2020) is reporting the ADC and contributions made during the period 7/1/2019 - 06/30/2020.

1/ for years prior to FYE 2020, Based on the salary information provided from Montgomery County and the prior actuarial disclosure report. For FYE 2020, the payroll is based on projected payroll.



Actuarial Assumptions as required by GASB 74 and GASB 75

The Total and Net OPEB liability as of June 30, 2020, was determined by an actuarial valuation as of July 1, 2019 using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise noted below.

Actuarial cost method	Entry Age Normal
Discount Rate	5.68%
20 Yr. Municipal Bond Rate	2.45%
Municipal Bond Rate Basis	20-year tax exempt general obligation municipal bond with an average rating of AA/Aa
Expected Return on Assets	7.50%
Salary Increases	Vary based on participant group and service. Increases start between 4.25% and 8.25% at hire and decrease to 0.50% after 30 years of service. Increases are net of inflation.
General Inflation	3.00%
Mortality:	
Healthy	Group A, H, J, GRIP – Pub-2010 Healthy Mortality, Headcount weighted, General Employees, Sex Distinct, Fully Generational projected from 2010 using scale MP-2018
	Group E, F, G – Pub-2010 Healthy Mortality, Headcount weighted, Public Safety Employees, Sex Distinct, Fully Generational projected from 2010 using scale MP-2018
Disabled	Group A, H, J, GRIP – Pub-2010 Disabled Mortality, Headcount weighted, General Employees, Sex Distinct, Fully Generational projected from 2010 using scale MP-2018
	Group E, F, G – Pub-2010 Disabled Mortality, Headcount weighted, Public Safety Employees, Sex Distinct, Fully Generational projected from 2010 using scale MP-2018
Health care cost trend rates:	The medical trend assumption was developed using the Society of Actuaries (SOA) Long-Run Medical Cost Trend Model, version 2019_b. The initial rate is 5.40% and the ultimate rate is 3.68%.

Appendix B. Discount Rate Determination



Montgomery County Government For the June 30, 2020 Measurement Date

Table 1 - Projection of Employer Contributions

	Projected Contributions											
		Total	Con	tributions	Contributions							
Fiscal	E	mployer	Fo	r Future	For Current							
Year	Co	ntribution	Em	ployees	Pa	rticipants						
Ending		(a)		(b)	(c)	= (a) - (b)						
2021	\$	77,145	\$	-	\$	77,145						
2022	\$	78,614	\$	-	\$	78,614						
2023	\$	77,850	\$	-	\$	77,850						
2024	\$	76,935	\$	-	\$	76,935						
2025	\$	76,046	\$	-	\$	76,046						
2026	\$	75,170	\$	-	\$	75,170						
2027	\$	74,418	\$	-	\$	74,418						
2028	\$	73,616	\$	-	\$	73,616						
2029	\$	72,817	\$	-	\$	72,817						
2030	\$	72,008	\$	-	\$	72,008						
2031	\$	71,148	\$	-	\$	71,148						
2032	\$	70,264	\$	-	\$	70,264						
2033	\$	69,459	\$	-	\$	69,459						
2034	\$	68,620	\$	-	\$	68,620						
2035	\$	67,769	\$	-	\$	67,769						
2036	\$	66,881	\$	-	\$	66,881						
2037	\$	65,982	\$	-	\$	65,982						
2038	\$	65,089	\$	-	\$	65,089						

Note: Years subsequent to 2038 have been omitted from this table.

Appendix B. Discount Rate Determination



Montgomery County Government For the June 30, 2020 Measurement Date

Table 2 - Projection of OPEB Plan's Fiduciary Net Position

		Projected Beginning	Cor	rojected ntributions	F	Projected		Projected				Projected
Fiscal		Fiduciary			Benefit		Investment		Administrative		Ending Fiduciary	
Year	1	Net Position	Pa	rticipants ¹	Payments		Earnings		Expenses		Net Position ²	
Ending		(a)		(b)		(c)	(d)			(e)	(f)	
2021	\$	620,552	\$	77,145	\$	66,327	\$	46,927	\$	352	\$	677,945
2022	\$	677,945	\$	78,614	\$	71,817	\$	51,083	\$	363	\$	735,462
2023	\$	735,462	\$	77,850	\$	77,543	\$	55,157	\$	374	\$	790,552
2024	\$	790,552	\$	76,935	\$	83,247	\$	59,045	\$	385	\$	842,899
2025	\$	842,899	\$	76,046	\$	89,305	\$	62,715	\$	397	\$	891,958
2026	\$	891,958	\$	75,170	\$	95,348	\$	66,139	\$	409	\$	937,511
2027	\$	937,511	\$	74,418	\$	100,894	\$	69,323	\$	421	\$	979,937
2028	\$	979,937	\$	73,616	\$	106,734	\$	72,260	\$	434	\$	1,018,645
2029	\$	1,018,645	\$	72,817	\$	112,439	\$	74,923	\$	447	\$	1,053,499
2030	\$	1,053,499	\$	72,008	\$	117,431	\$	77,323	\$	460	\$	1,084,939
2031	\$	1,084,939	\$	71,148	\$	122,207	\$	79,473	\$	474	\$	1,112,880
2032	\$	1,112,880	\$	70,264	\$	127,230	\$	81,350	\$	488	\$	1,136,776
2033	\$	1,136,776	\$	69,459	\$	131,642	\$	82,950	\$	503	\$	1,157,041
2034	\$	1,157,041	\$	68,620	\$	136,166	\$	84,272	\$	518	\$	1,173,249
2035	\$	1,173,249	\$	67,769	\$	140,297	\$	85,303	\$	533	\$	1,185,491
2036	\$	1,185,491	\$	66,881	\$	143,655	\$	86,065	\$	549	\$	1,194,233
2037	\$	1,194,233	\$	65,982	\$	147,447	\$	86,547	\$	566	\$	1,198,749
2038	\$	1,198,749	\$	65,089	\$	151,093	\$	86,718	\$	583	\$	1,198,880
2039	\$	1,198,880	\$	64,337	\$	154,506	\$	86,574	\$	600	\$	1,194,685
2040	\$	1,194,685	\$	63,535	\$	157,909	\$	86,104	\$	618	\$	1,185,797
2041	\$	1,185,797	\$	62,760	\$	161,439	\$	85,278	\$	637	\$	1,171,759
2042	\$	1,171,759	\$	61,990	\$	164,650	\$	84,078	\$	656	\$	1,152,521
2043	\$	1,152,521	\$	61,181	\$	167,551	\$	82,497	\$	675	\$	1,127,973

Note: Years subsequent to 2043 have been omitted from the table.

¹ From Table 1, Column (c) ² (f) = (a) + (b) - (c) + (d) - (e)

Appendix B. Discount Rate Determination



Montgomery County Government For the June 30, 2020 Measurement Date

Table 3 - Actuarial Value of Projected Benefit Payments

Fiscal Year Ending	ear Net Position ¹ Payments		"Funded" Portion of Benefit Payments (c)	"Unfunded" Portion of Benefit Payments (d)		Present Value of "Funded" Benefit Payments ² (e)		of "	esent Value 'Unfunded" Benefit ayments ³ (f)	Present Value of Benefit Payments Using the Single Discount Rate ⁴ (g)		
2021	\$	620,552	\$ 66,327	\$ 66,327	\$	-	\$	63,971	\$	-	\$	64,519
2022	\$	677,945	\$ 71,817	\$ 71,817	\$	-	\$	64,434	\$	-	\$	66,101
2023	\$	735,462	\$ 77,543	\$ 77,543	\$	-	\$	64,717	\$	-	\$	67,533
2024	\$	790,552	\$ 83,247	\$ 83,247	\$	_	\$	64,631	\$	-	\$	68,600
2025	\$	842,899	\$ 89,305	\$ 89,305	\$	-	\$	64,497	\$	-	\$	69,634
2062	\$	189,203	\$ 128,867	\$ 128,867	\$	-	\$	6,408	\$	-	\$	12,991
2063	\$	133,494	\$ 125,319	\$ 125,319	\$	-	\$	5,796	\$	-	\$	11,954
2064	\$	77,902	\$ 122,144	\$ -	\$	122,144	\$	-	\$	42,619	\$	11,024
2065	\$	22,068	\$ 119,068	\$ -	\$	119,068	\$	-	\$	40,552	\$	10,169
2109	\$	-	\$ 115	\$ -	\$	115	\$	-	\$	14	\$	1
2110	\$	-	\$ -	\$ 	\$	-	\$	-	\$	-	\$	-
2111	\$	-	\$ -	\$ -	\$	-	\$	-	\$	-	\$	-
Total							\$	1,543,054	+ \$	576,539	= \$	2,119,593

Note: Years 2026-2061, 2066-2108, and 2112+ have been omitted from this table but included in the totals.

Note: 5.68% was selected so that the Present Value of Benefits (column (g)) would equal the sum of columns (e) and (f).

¹ From Table 2, Column (a)

² (e) = (c) / (1 + 7.5%)^(year-2020-0.5)

 $^{^{3}}$ (f) = (d) / (1 + 2.45%)^(year-2020-0.5)

⁴ (g) = (b) / (1 + 5.685%)^(year-2020-0.5)