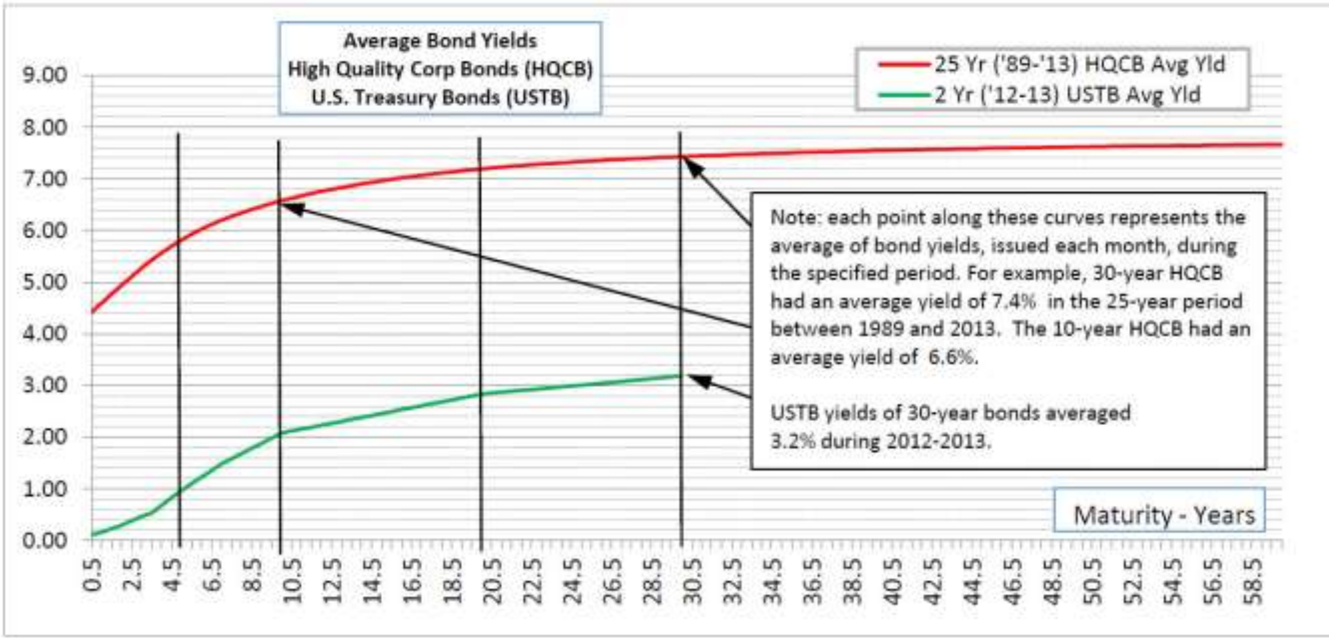
From: Paul Kende May 9, 2018
To: DuPont Retirees Chapter Members
Financial Status of the DuPont Pension Plan (Updated 1/5/18 Status Report, based on latest 10K and AFN Reports)

The key official documents, reporting on the status of the DuPont Pension Plan, are the year-end, audited 10K filings with the SEC, the Annual Funding Notice (AFN) published in April of each year, and the Form 5500 Reports, filed with the Department of Labor each October. Aligning, interpreting and understanding these documents are difficult. The purpose of this note is to A) provide some explanation of the key financial concepts and mechanisms, B) facilitate understanding and assessment of the DuPont Pension Plan's financial status and various questions about them, and C) draw some conclusions at the end.

A. General Pension-Related Financial Concepts

To be able to measure the adequacy of a pension plan to meet its obligations over many years in the future, these obligations are represented by their Present Value. Calculations of Present Values require the use of Discount Rates, which in turn, are based on the yields provided by Corporate or U.S. Treasury Bonds, forming part of the Pension Plan investment portfolio.

The graph below shows two bond yield curves for a wide range of maturities. The red line is the 25-year average yield curve of High Quality Corporate Bonds from 1989-2013, and the green line is the 2-year average yield curve for US Treasury Bonds – which offer lower yields but with less risk. These graphs are based on the yield data provided by the US Treasury. Naturally, the "last" 25-year average yield curve would shift slightly each year.



The Discount Rate used to calculate the Present Value of future pension obligations, is either the yield value from a yield curve at a particular maturity ("spot rate"), or the average yield over a selected maturity segment.

Discount Rates in the past were conservative, using the 2-year average U.S. Treasury Bond yields. However, the 2012 MAP-21 legislation permits pension plan sponsors to use the much higher 25-year average corporate bond yields. The use of higher yields lowers the Present Value of future benefit obligations, and therefore reduces the difference between assets and obligations, which then reduces the required pension plan contributions. For this reason, the MAP-21 legislation is also referred to as "Pension Funding Relief", put in place by Congress to ease the minimum required pension plan contributions, in the low interest environment after the 2008 financial crisis. In 2015, MAP-21 legislation was extended until 2020.

In addition to Yield Curves and Discount Rates, the actuarial assumptions required to calculate the Present Value of Pension Obligations, include time in retirement, projected salary increases of vested employees, and the life expectancy of Participants – and all these factors vary with time. In particular, the new mortality tables, just released by the Internal Revenue Service, indicate increased life expectancies, which will likely increase Pension Plan funding liabilities, minimum required sponsor contributions and PGBC premiums.

B. Assessment of Pension Financial Status Extracted From DuPont's AFN and 10K Reports

I have compared DuPont's financial reports in detail, for the 2012-17 Plan Years. The summary of the comparison is shown in the table below only for 2016 - 2017. The AFN report refers to the US Pension Plan, while the 10K is a comprehensive and global financial report, from which I extracted the US Pension Plan-related data for comparison. The April AFN report refers to Pension Plan financial status as of January 1 of the previous year (a 16-month delay), while the February 10K report defines status as of December 31 of the previous year (a 2-month delay). For clarity, I assembled all Pension Plan financial values at year-end 2016 and 2017, recognizing that the start of one year is the same as the end of the previous year. Because the 5500 Report, issued in October, shows the same figures as the AFN, I do not include these in the table below.

DuPont Pension Plan Financial Status	DuPont US Pension Plan on Dec 31					
Key Pension Parameters	YE2016 AFN pg1 MAP-21	YE2016 AFN suppl'nt Non-MAP	YE2016 10 K	YE2017 AFN pg2 Fair Mrkt Val	YE2017 10 K	Definitions
Assets - $M	Net 13,897	Net 13,897	Total13,500	Total 16,660	Total 16,700	
Liabilities/Funding Target - $M	16,323	19,404	19,891	19,248	20,328	=Assets-Shortfall
Short Fall/Funded Status - $M	-2,425	-5,507	-6,391	-2,588	-3,628	=Assets-Liabilities
FTAP %/Funding Level -%	85.14	71.62	67.87	86.56	82.15	=Assets/Liabilities

The primary variables are Assets and Liabilities. Liabilities, Shortfalls and Funding Levels are either directly stated in the reports, or derived from them (blue font) through the simple subtraction or division formulas indicated in the definitions column. The table shows significant differences among the reports, as discussed below:

- The big differences in Pension Liabilities and Funding Levels, between the AFN/MAP-21 and the AFN/Non-MAP-21, result directly from the use of the 2-year average US Treasury Bill, vs. the 25-year average Corporate Bond yield, for investment calculations, as discussed on page 1.
- The second major difference between reports is attributable to different valuation methods. The AFN reports show actuarial asset values at average bond yield rates, for different bond yield curve segments, effectively smoothing out market fluctuations. However, the 10K reports are based on the Fair Market Value of Pension Assets and the full bond yield curve, at the year-end "spot rate"– which can be higher or lower than the actuarial values shown in the other reports. In addition, the 10K report includes the projected increase in pension

obligations, due to employee pay growth, which the other reports do not include (this difference will disappear after the full pension freeze on 11/30/2018).

- Note that the $16.66B Total Assets in YE2017 AFN/page 2, is $2.763B more than the Net Assets value of $13.897 in YE 2016 – this is from the $2.9B May, 2017 contribution. The AFN Fair Market Value of Assets closely matches the 10K report's value of $16.7B.
- The discrepancy between the 2017 AFN/pg2 Fair Market Value Liabilities, and the 10 K report's, are due to different discount rates and mortality tables used – as required by the accounting rules pertaining to the different reports.
- The table above shows the Pension Plan status at the end of 2016 and 2017. The shortfall, as stated in the 10K reports, was $6.4 billion at YE2016, dropping to 3.6 billion at YE2017. This is partly because DuPont made a major, $2.9 billion contribution In May of 2017, going well beyond the $230 million minimum requirement, both strengthening the plan and ensuring higher tax deductions, before corporate tax rates dropped for 2018. This Contribution adds to the Pension Plan Credit Balance, and is to be used to satisfy future minimum contribution requirements. Although these funds are locked into the Pension Trust, they do not raise the Funding Level, as shown in the AFN and 5500 reports, because any Credit Balance is subtracted from Total Assets before that calculation; however, the contribution is reflected in the Funding Level shown in the February 2018 10K report. In addition, YE2017 net assets increased by $300 million, beyond the $2.9 billion contribution, probably attributable to investment performance.
- The 2016-17 Lump Sum Buyout offers, to people not yet drawing their vested pensions, reduced both assets and liabilities, with minimal effect on funding levels.

C. Conclusions

The AFN (with and without MAP-21 discount rate adjustments) and the 10K reports may accurately reflect the Pension Plan's financial status for different purposes, but they use different valuation methods, mortality tables, discount rate assumptions and timing. The format and accounting methodology used for the AFN reports are dictated by ERISA/IRS rules, while the 10K report is based on the Generally Accepted Accounting Standards, resulting in sometimes large apparent discrepancies. In any case, the differences in the reported parameters need to be understood in context.

What is the most appropriate approach to assess the plan from retirees' viewpoint? Using long-term average corporate bond yields to determine the present value of future obligations is reasonable, because the pension payout is also over a long time-frame. On the other hand, the Pension Plan is for the benefit of older, retired people, by definition; therefore, it is also appropriate to use the traditional, lower yield, but more secure US Treasury Bond – based planning. In addition, it is important to recognize the current Fair Market Value of assets, and the fully projected future liabilities of the Pension Plan. Considering all these factors, I believe the most appropriate retiree vantage point for assessing the security of our DuPont Pension Plan, is the one afforded by the annual 10K SEC report - which shows a $3.6 B shortfall at YE2017, and a Funding Level rising from 68% in 2016, to 82% in 2017, slightly above the 80% level, below which it would generally be considered "at risk". However, the Plan is still significantly underfunded, and this would likely get worse without further contributions from DowDuPont, or its successors.

Your comments and questions are always welcome, Paul Kende **paul.kende@gmail.com**