WESTERN PENNSYLVANIA TEAMSTERS AND EMPLOYERS PENSION FUND

SUSPENSION APPLICATION

Exhibit 9

Economist Report

Report to the Western Pennsylvania Teamsters and Employers Pension Fund

Presented by
Elizabeth A. Paulin, Ph.D.
September 25, 2017

Background and Summary of Findings

On March 30, 2017, the actuary for the Western Pennsylvania Teamsters and Employers Pension Fund "certified to the U.S. Department of the Treasury, and also to the plan sponsor, that the Pension Fund is in 'Critical and Declining' status" for the 2017 Plan Year.[1] Furthermore, the Fund is projected to go insolvent in 2028.[2]

I have been retained by the Fund Trustees "to perform research and consult with the Board on economic factors affecting the WPa Fund's reasonably sustainable future contribution expectations within the context of the Multiemployer Pension Reform Act of 2014 ("MPRA"), specifically, those industry trends and economic factors associated with MPRA provisions at 26 U.S.C. § 432(e)(9) of the Internal Revenue Code." In consultation with the Fund's legal representative and actuary I focused my research on two major, interrelated issues which lie at the heart of the Fund's solvency[3]:

- The continued participation of employers in the Fund, and
- Future contribution increases.

After thoroughly researching industry and occupational trends and forecasts as well as performing a statistical analysis of the major factors affecting the number of active participants in the Fund, I am forecasting **a <u>decline</u> in the number of active participants by 2.14% to 2.63% per year through 2037**.

Given the importance of stemming the flow of employers from the Fund, it is imperative that future increases in contribution rates do not erode the competitive position of current Fund employers in the marketplace. Based upon competitors' pension contributions and forecasts of wage growth over the next 10 years, I conclude that **increases in contributions of <u>up to 3%</u> per year over the next 10 years will not threaten the competitiveness of employers in the Fund**.

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[1] Source: Western Pennsylvania Teamsters and Employers Pension Fund. Notice of Critical and Declining Status for the 2017 Plan Year, dated April 30, 2017.
[2] Source: Western Pennsylvania Teamsters and Employers Pension Fund. Letter to Fund Retirees, Participants and Participating Local Unions and Employers, dated April 30, 2017.
[3] Note, adequate funding for the Fund also depends upon the Fund's investment returns. I do not address that issue in this report.

This report is divided into two parts. Part 1 details the reasoning and statistical analysis behind the forecasted decline in the number of active participants in the Fund. Part 2 details the reasoning behind my conclusion that continued annual increases in contributions of 6% are not sustainable given the competitive pressures of the marketplace; and, that a 3% annual increase is more in line with the competition.

Part 1. Forecast of Declining Participation in the Fund.

The discussion in this section begins with a review of the historical data on the number of active participants in the Fund and breaks down the decline into its two component parts: (1) the decline in the number of employers in the Fund, and (2) the net decline in the number of active participants employed by those remaining in the Fund. We then turn our attention to the major factors responsible and, using regression analysis, estimate the quantitative impact of these factors on the number of active participants. Using the regression results and projections regarding future changes in the explanatory variables in our model, we then arrive at our forecast.

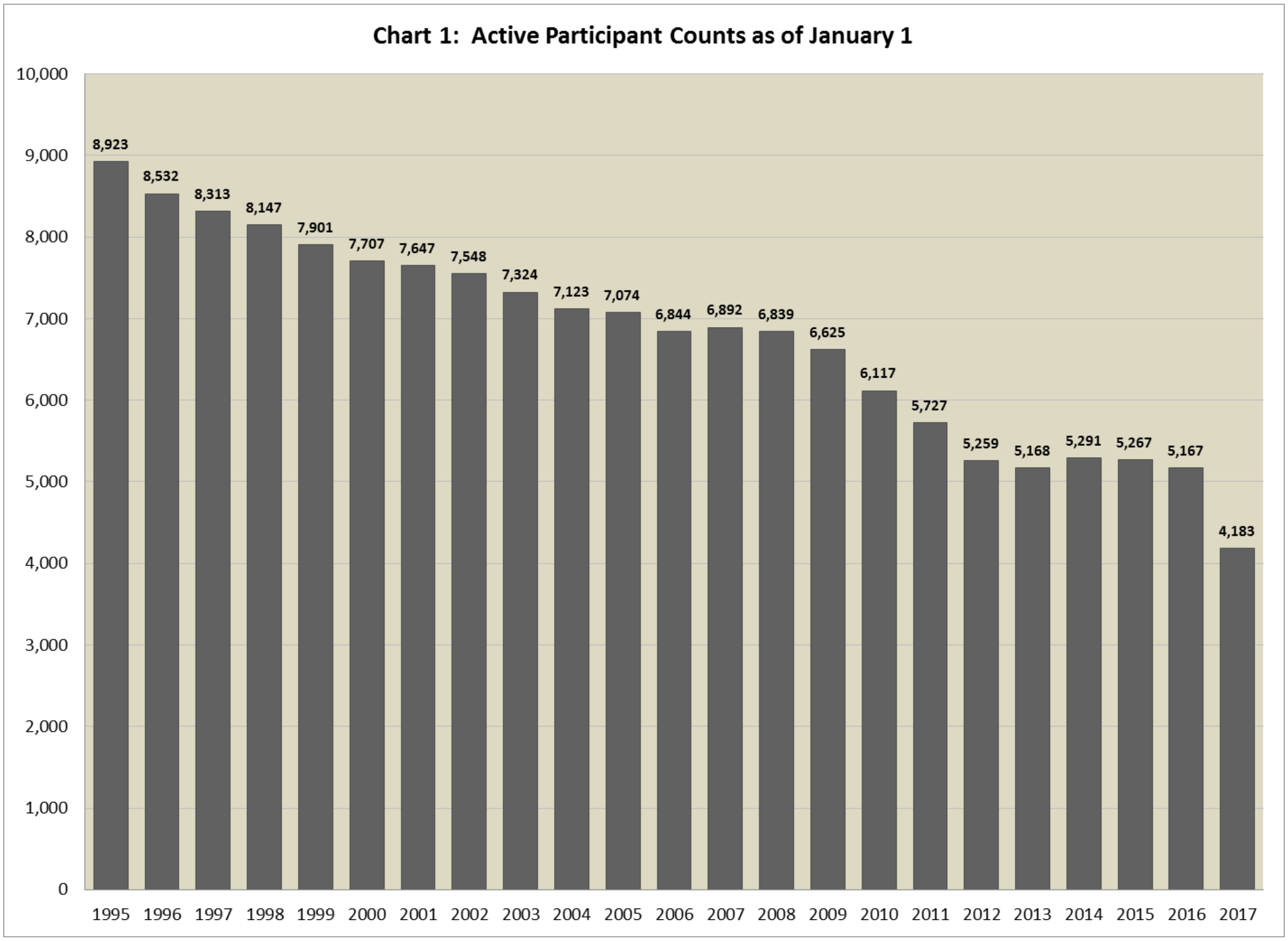
Active Participants

As illustrated in Chart 1, the number of active participants in the Fund declined from January 1, 1995 through 2017 in every year but two, 2006 and 2013.

Some important facts to note:

- From the beginning of 1995 to the beginning of 2017,
    - the number of active participants decreased at an **average annual rate of -3.4%,**
    - for a total decrease of 53% (or 4,740 employees)
- In the post-recession period, beginning January 1, 2010, the average annual rate of decline equaled
    - **-2.8%** through January 1, 2016 and a higher average rate of
    - **-5.3%** through January 1, 2017 due to the withdrawal in 2016 of Giant Eagle with 603 active participants.

Mathematically, the number of active participants in a pension plan declines when there is (1) a decline in the number of employers in the fund, and/or (2) a decline in the number of actives participants per employer. In the case of the WPa Fund, both forces are at work.



Source: Western Pennsylvania Teamster & Employers Pension Fund

Active Employers and Active Participants per Employer

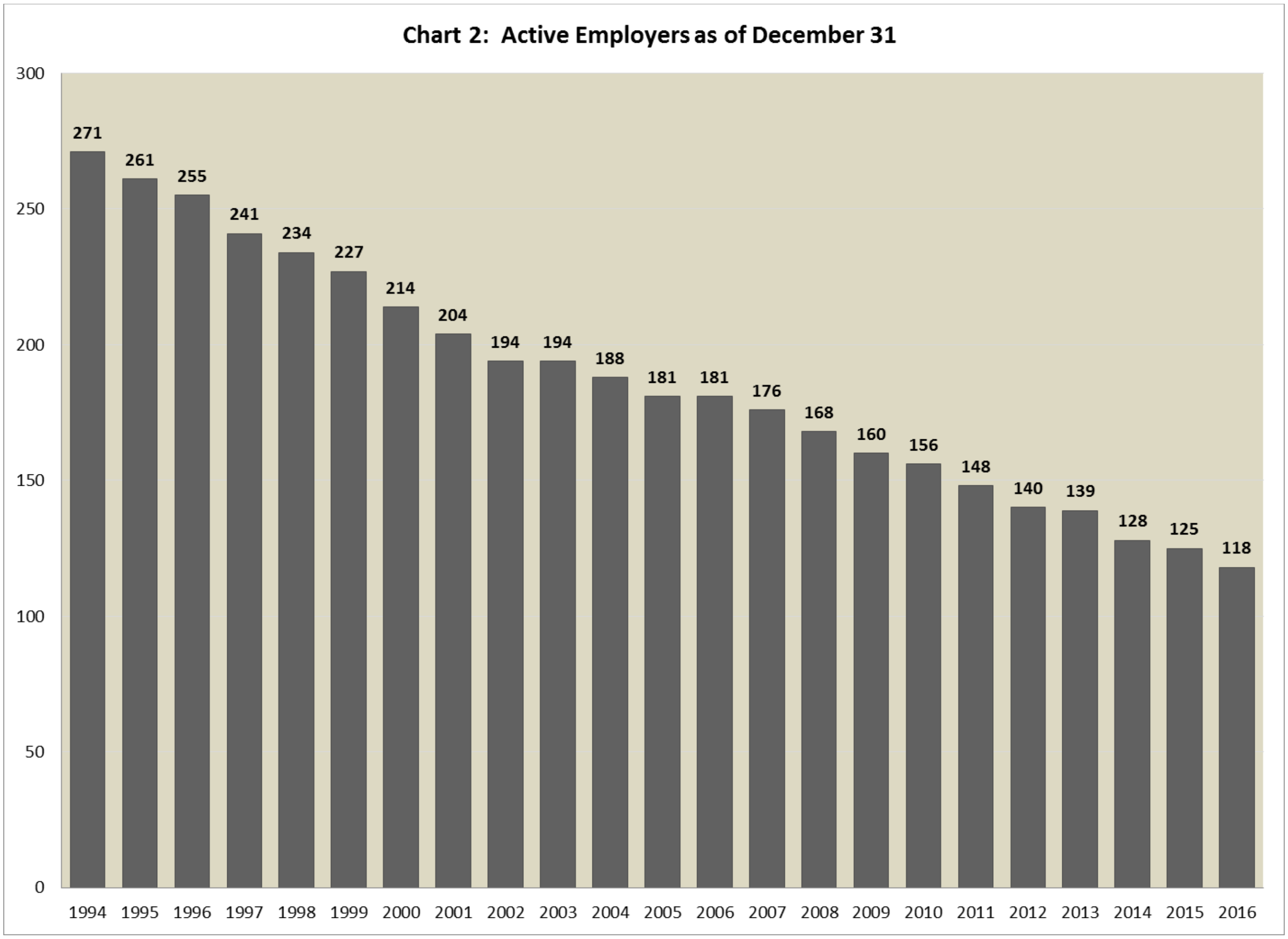
Chart 2 below illustrates the decline in the number of active employers in the Fund over the last 22 years. From December 31, 1994 to 2016, the number of active employers decreased each year (with the exception of 2003 and 2006 when there was no change.)[4]

Some important facts to note:

- From the end of 1994 to the end of 2016,
  - the number of active employers decreased at an **average annual rate of -3.9%,**
  - for a total decrease of 56% (or 153 employers)

[4] Since 1995, only 12 new employers joined the fund; and of those 12, only 3 remain.

- In the post-recession period, beginning December 31, 2009[5] the average annual rate of decline equaled
    - **-4.0%** through December 31, 2015 and
    - **-4.3%** through December 31, 2016.



Source: Western Pennsylvania Teamster & Employers Pension Fund

In addition to the decline in the number of employers, in most years the number of active participants per employer also declined. As documented in Table 1,

- From 1995 through 2016,
    - 70% of the decline in the number of active participants was the result of the withdrawal of employers from the Fund, while

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[5] The census of active participants is reported as of January 1, whereas the census of employers is reported as of December 31.

    - 30% of the decline was due to a net decrease in the number of active participants employed by those employers who remained.
- In the post-recession period, from 2010 through 2016,
    - 60% of the decline was the result of the withdrawal of employers, while
    - 40% of the decline was due to a net decrease in the number of active participants employed by the remaining employers.

The last two columns of Table 1 break down the decline in participants by large employer withdrawal (i.e., those employers with 50 or more active participants) and small employer withdrawal (i.e., those with less than 50 active participants), highlighting the importance of moderating the withdrawal of both large and small employers for the future solvency of the Fund.

As an aside, it is important to point out that large employer withdrawal affects the financial condition of the Fund in a more significant way than the withdrawal of multiple small employers. Currently, of those companies with 1 or 2 active participants, the (weighted) average weekly compensation rate is $161.41.[6] Of those companies with 100 or more active participants, the (weighted) average weekly compensation rate is $292.84. Thus, with regard to the number of employers in the Fund, employers are not equally critical to the solvency of the Fund.

[6] Weighted average of companies with 1 or 2 active participants, excluding employers which are unions.

Table 1. Change in Active Participants, 1995-2016

Year	Total Number of Actives Gained (Lost)	Actives Lost through Employer Withdrawal	Actives Gained (Lost) Among Remaining Employers	*Actives Lost Through Large Employer Withdrawal*	*Actives Lost through Small Employer Withdrawal*
1995	(391)	(139)	(252)	*(50)*	*(89)*
1996	(219)	(194)	(25)	*(76)*	*(118)*
1997	(166)	(118)	(48)		*(118)*
1998	(246)	(120)	(126)		*(120)*
1999	(194)	(419)	225	*(370)*	*(49)*
2000	(60)	(121)	61		*(121)*
2001	(99)	(145)	46		*(145)*
2002	(224)	(273)	49	*(175)*	*(98)*
2003	(201)	(165)	(36)	*(138)*	*(27)*
2004	(49)	(44)	(5)		*(44)*
2005	(230)	(25)	(205)		*(25)*
2006	48	(16)	64		*(16)*
2007	(53)	(21)	(32)		*(21)*
2008	(214)	(237)	23	*(188)*	*(49)*
2009	(508)	(118)	(390)	*(70)*	*(48)*
2010	(390)	(37)	(353)		*(37)*
2011	(468)	(227)	(241)	*(158)*	*(69)*
2012	(91)	(140)	49	*(89)*	*(51)*
2013	123	(5)	128		*(5)*
2014	(24)	(42)	18		*(42)*
2015	(100)	(13)	(87)		*(13)*
2016	(984)	(704)	(280)	*(613)*	*(91)*
1995-2016					
Net Loss	(4,740)	(3,323)	(1,417)	*(1,927)*	*(1,396)*
Percentage of Net	-	70%	30%	*41%*	*29%*
2010-2016					
Net Loss	(1,934)	(1,168)	(766)	*(860)*	*(308)*
Percentage of Net	-	60%	40%	*44%*	*16%*

Source: Western Pennsylvania Teamster & Employers Pension Fund

Factors Affecting the Decline in the Number of Employers in the Fund

The decline in the number of employers in the Fund is consistent with national patterns. Indicative of a decline in the number of employers in multi-employer defined benefit pension plans, [7]

- From 1995 through 2014 (the latest year available) the number of multi-employer pension plans decreased by 15%. Of that number, 87% were defined benefit plans.
- From 1995 through 2014 the number of active participants in multi-employer defined benefit pension plans decreased by 539 thousand, or 12%[8].

Several reasons have been cited for these declines at the national level, three of which are relevant for this analysis: the decline in union membership, the long-run decline in industries (and hence employment) where multi-employer plans exist, and the cyclical nature of those industries. Furthermore, according to researchers at the Center for Retirement Research at Boston College, the resulting trend away from multiemployer plans is likely to continue:

> "First, employers negotiating collective bargaining agreements are now reluctant to enter multiemployer plans, because they are effectively assuming some portion of the plan's unfunded liability. Even if the plan is currently fully funded, they expose themselves to future expense if market conditions deteriorate and the plan becomes underfunded as a result. And, second, some employers are strategically negotiating withdrawals, based on the conclusion that the plan will eventually become insolvent and it is better to withdraw now before liabilities increase."[9]

The WPa Fund has not been immune to the long-run and cyclical declines in employment in many of those industries which feed the Fund, the decline in union membership, the reluctance of new employers to enter the Fund, and the negotiated withdrawal of current employers.

Forecasted Declines in the Number of Active Participants in the Fund

Specific to the Western Pennsylvania Teamsters & Employers Pension Fund, three factors stand out as key determinants of the number of active participants in the fund:

- employment trends, specifically those in the light truck or delivery services driver occupation (SOC Code 53033)[10],

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[7] Source: U.S. Department of Labor. Employee Benefits Security Administration. "Private Pension Plan Bulletin Historical Tables and Graphs 1975-2014." September 2016, Version 1.
[8] Note that from 1995 through 2014, the number of active participants in the Western Pennsylvania Teamsters Pension Fund decreased by 41%.
[9] Alicia H. Munnell and Jean-Pierre Aubry. "Private Sector Multiemployer Pension Plans – A Primer." Center for Retirement Research at Boston College. August 2014, No. 14-13, pages 5-6.
[10] According to the Bureau of Labor Statistics, those employed in this occupation "drive a light vehicle, such as a truck or van, with a capacity of less than 26,000 pounds Gross Vehicle Weight (GVW), primarily to deliver or pick up merchandise or to deliver packages. May load and unload vehicle. Excludes "Couriers and Messengers" (43-

- unionization trends, specifically in the transportation and material moving occupation, and
- increasing costs and risks associated with entering and remaining in the Fund.

Employment in the Light Truck or Delivery Services Driver Occupation (SOC Code 53-3033).

As illustrated in Chart 3, the number of Pennsylvanian's employed as light truck or delivery service drivers declined by 30% from 2003 through 2016. Over the same period, the number of active participants in the Fund also declined, albeit by a larger percentage (43%). Given that potential participants in the Fund are drawn, in part, from this occupational class, one can attribute part of the decline in the number of active participants in the Fund to the decline in the overall number of Pennsylvanians employed as light truck or delivery service drivers.

While not all employees in the Fund are members of this occupational class, the number of active participants in the Fund and the number of Pennsylvanians employed as a light truck or delivery service driver are highly correlated as indicated by a correlation coefficient of 0.90.[11] In comparison, the correlation between Pennsylvanian's employed as heavy and tractor-trailer truck drivers --SOC code 53-3032-- and participation in the Fund is a very weak -0.26. Given that employment of light truck and delivery service drivers in the state and the number of active participants in the Fund have both experienced the same downward trend, the question then becomes, what are the prospects for future employment in this occupation, particularly in western Pennsylvania.

Projected growth in the employment of light truck and delivery service drivers.

The most recent long-term projections for growth in employment in this occupational category is for the period 2014-2024.[12] According to CWIA Employment Projections, from 2014 to 2024, the number of employees in this occupational category in Pennsylvania is forecast to increase by a total of 1,540 for an average annual increase of 0.4%.[13] In the 3 metropolitan statistical areas reported for western Pennsylvania, the average annual increases are slightly larger:

- Pittsburgh MSA: 0.5%
- Erie MSA: 0.5%
- Altoona MSA: 0.7%

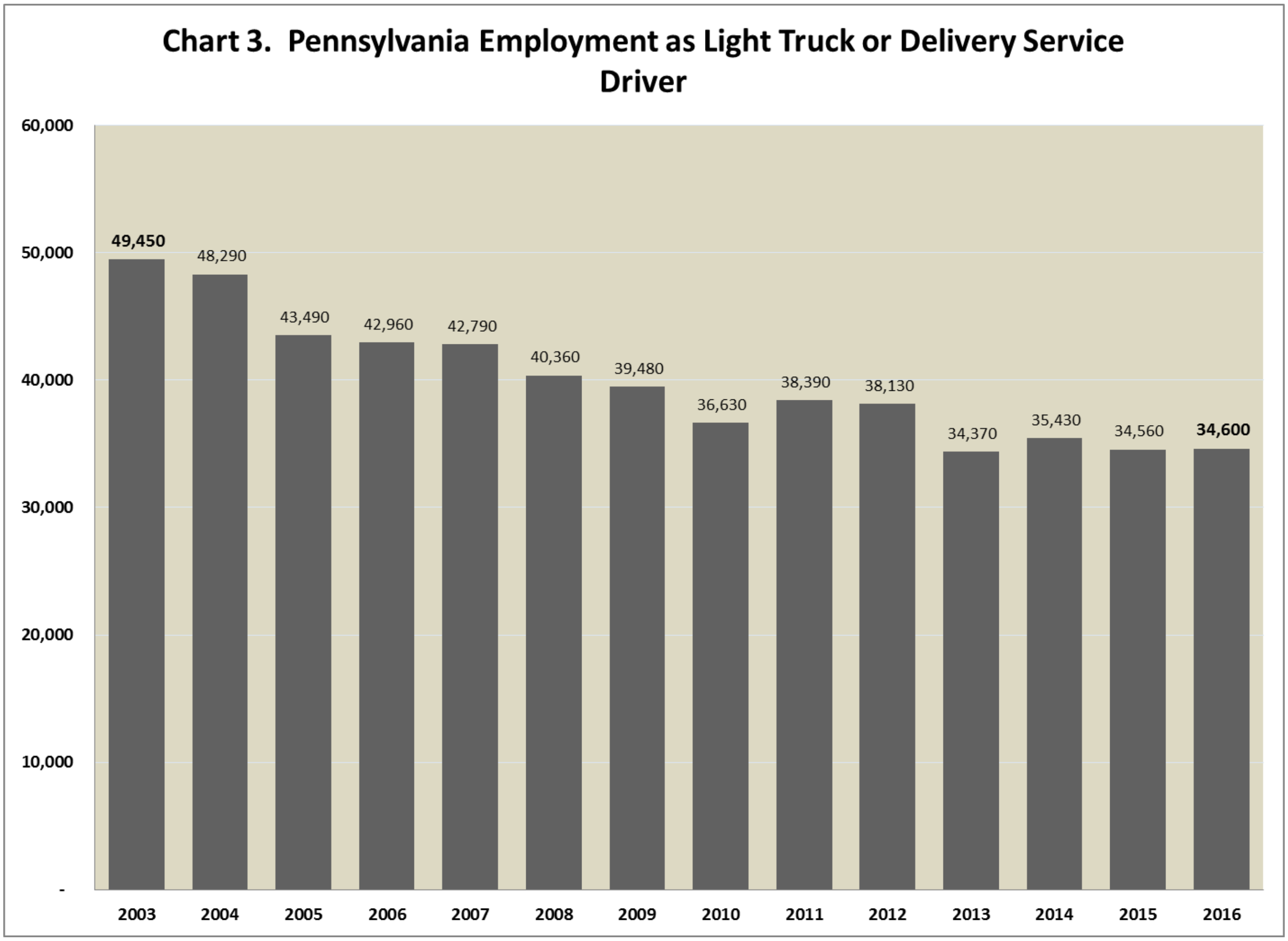
All else equal, an increase in employment in this occupational category should result in an increase in the number of active participants in the Fund.

5021) and "Driver/Sales Workers" (53-3031)." Currently, data for Pennsylvania is available from 2003 through 2016 only. Source: https://www.bls.gov/oes/current/oes533033.htm

[11] Correlation coefficients range in value from +1 (indicative of a perfect, positive linear relationship between two variables) to -1 (indicative of a perfect, negative linear relationship). A correlation coefficient of 0 indicates there is no linear relationship between two variables. The correlation coefficient of 0.90 indicates a very strong, positive relationship, while a correlation coefficient of -0.26 indicates a very weak, negative relationship.

[12] Forecasts are reported every 2 years. The next forecast, 2016-2026 is due to be published at the end of September, 2017.

[13]Pennsylvania Department of Labor and Industry. CWIA Employment Projections. <https://paskc.hbg.psu.edu/Services/CWIAOccupationalProjections/tabid/2268/Default.aspx



Source: Bureau of Labor Statistics. Occupational Employment Statistics. Research Estimates by State and Industry. https://www.bls.gov/oes/tables.htm

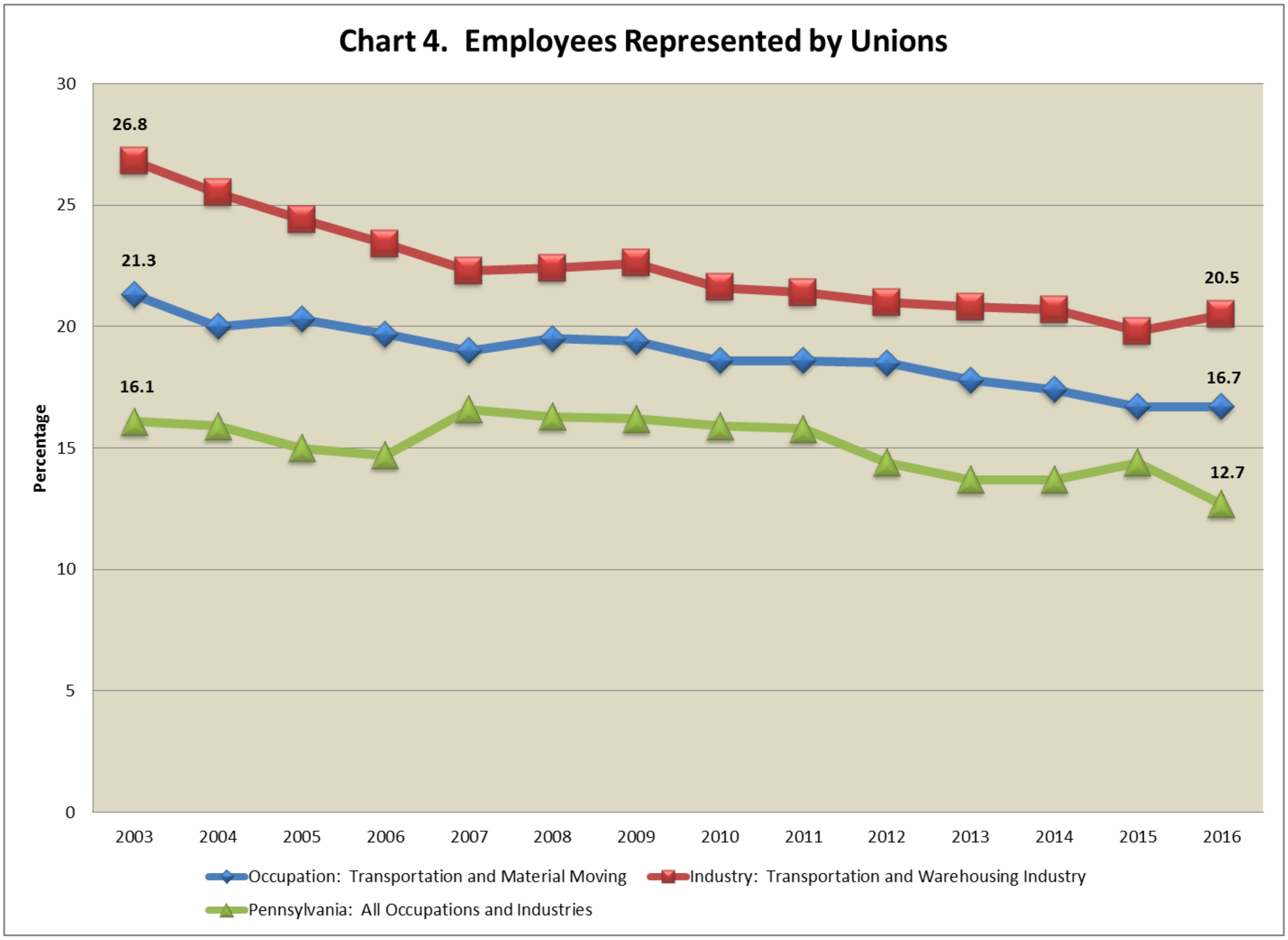
Unionization Trends

A second factor affecting the number of active participants in the Fund concerns unionization trends.

Chart 4 illustrates the decline in the number of employees covered by union agreements. The top 2 time-series are for the US as a whole. The third (green line) is for all occupations and industries in Pennsylvania. In looking at the correlations between the number of active participants in the Fund and percentage of employees represented by Unions using these 3 different metrics, all are very strong:

- 0.88 between active participants and the percentage of U.S. employees in the Transportation and Warehousing industry represented by Unions.
- 0.91 between active participants and the percentage of U.S. employees in the Transportation and Material Moving Occupations represented by Unions.

- 0.75 between active participants and percentage of all employees represented by Unions in Pennsylvania.



Thus, given the declines in union representation, it stands to reason that even if the number of western Pennsylvanians employed as light truck or delivery service drivers increases by 0.5% per year, fewer and fewer of those new workers will be employed by union companies like those in the Fund.

Costs, Benefits, and Risks Associated with Remaining in the Fund

In evaluating the costs, benefits, and risks associated with entering and/or remaining in the Fund, it is important to compare those costs, benefits and risks to the alternatives. While it is beyond the scope of this report to fully assess different types of pension funds, a few brief comments can be made.

With respect to the costs of remaining in the Fund, over the last decade the Fund's employers' experienced contribution rate increases of 6% per year. As will be discussed in the second part of this report, such contribution rate increases place Fund employers at a competitive disadvantage, especially when compared to employers in defined contribution plans. With defined contribution plans, increases in employers' contributions are generally tied to increases in employee salaries and wages. Over the last decade, the nominal increase in private sector wages and salaries has been approximately 2% per year – resulting in a 4 percentage point differential. Consequently, it is quite clear that the costs associated with entering and/or remaining in the Fund put employers at a cost disadvantage.

With respect to the risks of remaining in the Fund, the Fund's "critical and declining" status speaks for itself.

Regression Analysis and Forecast

Using data from 2003 through 2016[14], the following regression was run:

$$Active\ Participants_t = \beta_o + \beta_1(Employ_t \times Union_t) + \beta_2(M\_DB_t) + \varepsilon_t$$

Where,

Active Participants is the number of active participants in the WPa Fund,

Employ is the number of Pennsylvanians employed in the SOC 53-3033 occupational class;

Union is the percentage of employees represented by unions in the Transportation and Material Moving Industries; and

M_DB is the number of active participants in multi-employer defined benefit pension plans with 100 or more active participants (used as a proxy for the cost and risk associated with multiemployer defined benefit pension plans), measured in thousands.

The results of the regression are as follows:

$$Active\ \hat{P}articipants_t = -4{,}362.87 + \underset{(3.06)}{0.15}\left(Employ_t \times Union_t\right) + \underset{(9.51)}{2.18}\left(M\_DB_t\right)$$

$$n = 12;\ R^2 = 0.99;\ \overline{R}^2 = 0.98;$$

The results are quite robust, in spite of the small sample size and the corresponding number of explanatory variables we are able to include in the model. Both slope coefficients are statistically significant at the 1% level of significance, and the R^2 (coefficient of determination) indicates the model can explain 99% of the variation in the number of active participants over the period 2003 through 2016.[15]

[14] Data on employment by occupational class is unavailable for years prior to 2003.
[15] A further indication of the strength of the model is the large adjusted R^2.

Using the results of the model and assuming,

- A 0.5% increase per year in employment of light truck and delivery service drivers (based on CWIA employment projections for the Pittsburgh and Erie MSAs);

- A 1.85% decrease per year in the percentage of U.S. employees in the Transportation and Material Moving Occupations represented by Unions (based on historical trend analysis); and

- A 1.47% decrease per year in the number of active participants in multiemployer, defined benefit pension plans with 100 or more active participants (based on historical trend analysis);

The model forecasts a decline in active participants of 2.38% per year with a margin of error of approximately 0.24 percentage points. In other words,

The model forecasts a decline between 2.14% and 2.63% per year from 2017 through 2037 in the number of active participants in the Fund.

Part 2. Future Contribution Increases

According to the Bureau of Labor Statistics,

> "from December 2006 to December 2016, employer benefit costs for private industry workers with union memberships increased 31 percent. Employer costs for benefits to nonunion workers increased 22 percent."[16]

These statistics, which include both retirement and health care benefits, point to the increasing competitive pressure from non-union employers and mirrors that experienced by employers in the Western Pennsylvania Teamsters & Employers Pension Fund.

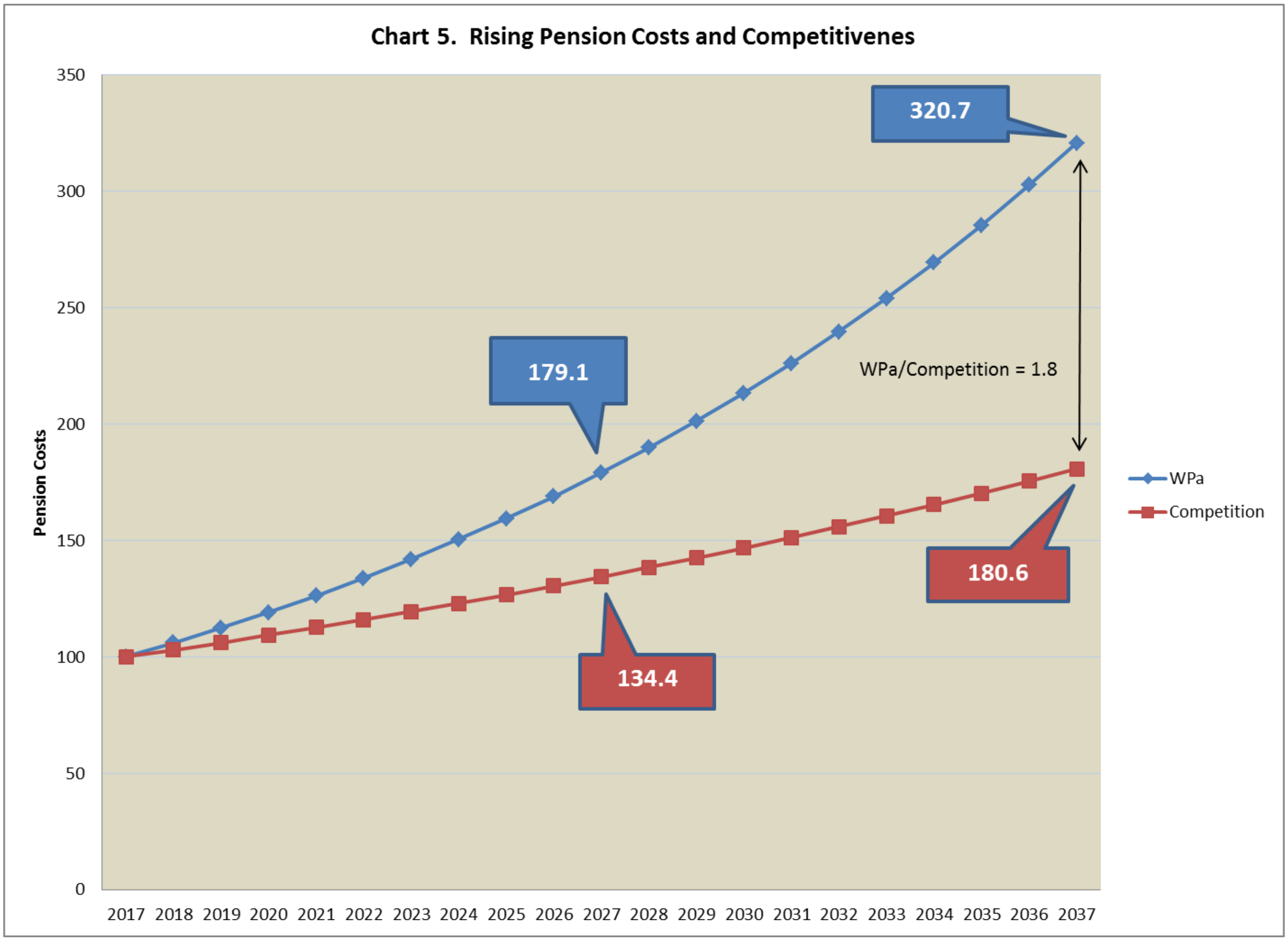
Since 2011, active employers in the Fund have seen their pension contributions increase by 6% per year. As a result, pension contributions for the Fund's employers have become a greater and greater percentage of total employee costs. For example, UPS, the Fund's largest employer, has seen its pension costs rise from 19% of pension and wages in 2006 to 27% in 2017.[17,18]

Such is not the case with competing employers with defined contribution plans. In general, employers in these plans contribute an amount equal to a fixed rate (e.g., 5%) of an employee's earnings. Consequently, employer contributions per employee will increase only to the extent that employee earnings increase.

According to the Congressional Budget Office's June 2017 report, *An Update to the Budget and Economic Outlook: 2017 to 2027* (www.cbo.gov/publication/52801), the private sector employment cost index (wages and salaries) is projected to increase at an average annual rate of 3% per year. If indeed, wages and salaries increase by 3%, then so too will the pension contribution by these employers.

Chart 5 illustrates the impact on Fund employer competitiveness if Fund employers' pension costs increase by 6% per year while competitor's costs rise by only 3%. Standardizing both to a pension cost of 100 today, Fund employers will be paying 33% more than their competitors in 10 years and 78% more in 20 years. Remaining competitive under such a scenario is all but impossible.

[16] Bureau of Labor Statistics. "Employer Costs for Benefits to Union Workers up 31% over Last Decade." February 2, 2017.
[17] Employer health care expenditures have also risen over this time period. Unfortunately, data on this expenditure is unavailable and thus the analysis focuses solely on pension plus wage costs.
[18] There is some evidence to suggest that the growth in employer pension and health care costs per employee have resulted in more sluggish growth in wages.



As a more specific example of the impact on competitiveness, consider the differential between UPS and its major competitor, the second largest small package employer in the Pennsylvania area, under two different scenarios:

(1) UPS continues to increase its pension contribution by 6% per year and
(2) The increase in UPS' contribution rate is reduced to 3% per year.

Competitor's Pension Funds and Estimates of Future Contributions

According to its 2017 10k, the competitor's "pension benefits for most employees are accrued under a cash balance formula we call the Portable Pension Account. Under the Portable Pension Account, the retirement benefit is expressed as a dollar amount in a notional account that grows with annual credits based on pay, age and years of credited service, and interest on the notional account balance."[19] The contribution amounts are as follows[20]:

- 5% of salary for those less than 55 years of age
- 6% of salary for those between the ages of 55 and 64
- 7% of salary for those between the ages of 65 and 74
- 8% of salary for those 75 years of age and older.

Interest paid on the accounts equals (1) the 1-year Treasury rate plus 1% or (2) 4%, whichever is greater.

In addition to this defined benefit plan, the competitor also offers its employees a voluntary 401(k) plan, whereby it matches 100% of the first 1% of salary contributed, and 50% of the next 5% of salary contributed.

In order to estimate future wage and pension costs, assumptions must be made with regard to

- The current average wage of a Competitor's driver

  According to the web site, www.truckdriverssalary.com/, the Competitor's truck drivers earn an average pay of $24 per hour. While this hourly rate is larger than that reported by other web sites, we will use this hourly rate and assume drivers work 2,080 hours per year for a 2017 annual salary of $49,920.

- Future wage growth

  As mentioned previously, according to the Congressional Budget Office's June 2017 report, *An Update to the Budget and Economic Outlook: 2017 to 2027* (www.cbo.gov/publication/52801), the private sector employment cost index (wages and salaries) is projected to increase at an average annual rate of 3% per year. Thus, I assume 3% wage growth for both the Competitor and UPS.

- Future interest payments on the Portable Pension Account's notional account balance

  The CBO report also forecasts that the interest paid on 3-month Treasury bills will not exceed 2.8% over the period. While interest on 1-year T-bills is generally higher than that of shorter term bills, the difference is not that significant. Consequently, we will assume 4% future interest payments on the Portable Pension Account's notional account balance.

- Employee contributions into the 401(k) plan.

  We will assume the Competitor's employees contribute the maximum amounts to the 401(k) plan.

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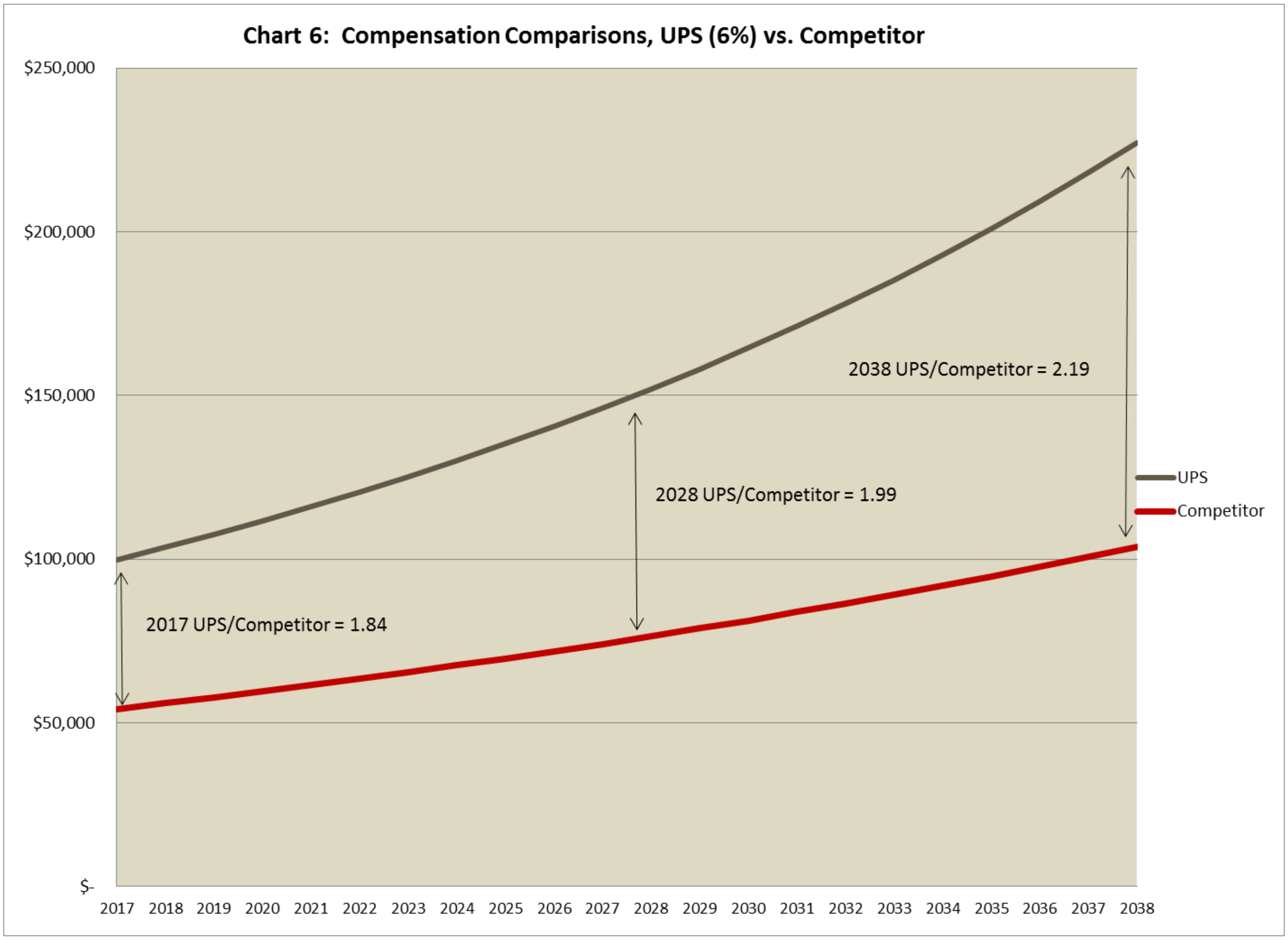
[19] Source: [redacted] Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended May 31, 2017, page 103.

[20] Source: [redacted] Form DEF 14a, filed with the Securities and Exchange Commission on August 14, 2017.

Competitive Differential Assuming Continued 6% annual increases in UPS Pension Contributions vs. 3% Annual Increases

Chart 6 illustrates the growing disadvantage faced by UPS as a result of 6% annual increases in the contribution rate. As a result of annual 6% increases, UPS wages and pension costs relative to those of its Competitor rise from

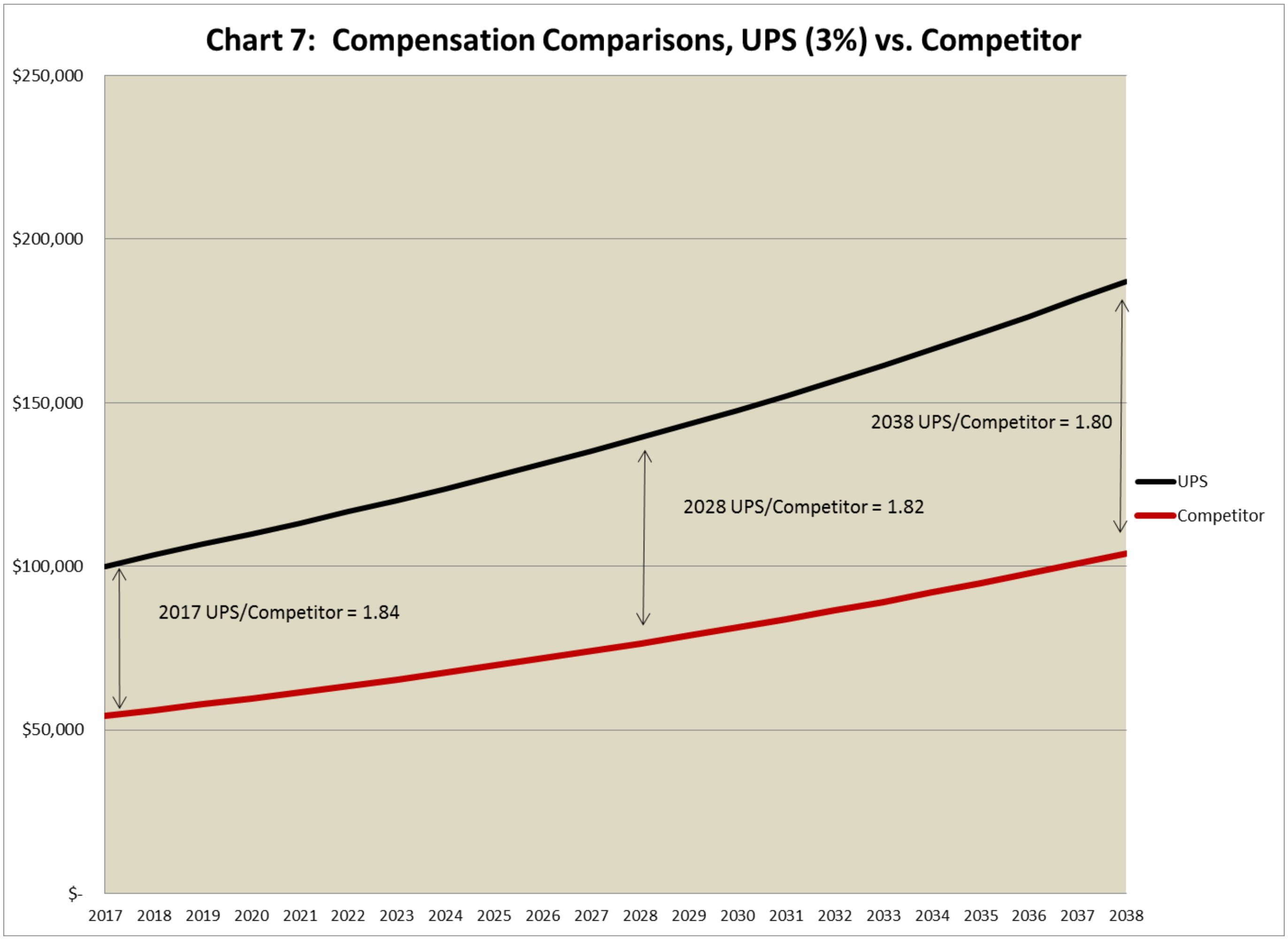
- 1.84 in 2017, to
- 1.99 in 2028, to
- 2.19 in 2038.[21]



[21] Assumes continued wage growth of 3% per year and 1-year T-Bill rates below 3%.

If, on the other hand, pension contribution rates increase at the same rate as wage growth (3%), then (as seen in Chart 7) UPS wages and pension costs remain relatively constant (compared to its competitor at

- 1.84 in 2017, to
- 1.82 in 2028, to
- 1.80 in 2038.



As more and more employers move to cash balance (defined benefit) pension plans and defined contribution plans, those employers who continue with their traditional, defined benefit pension plans will increasingly be placed at a competitive disadvantage. Given the structure of their plans, increases in pension costs (per employee) for those with cash balance or defined contribution plans will be limited to the rate of increase in wages and salaries. Consequently, for pension funds such as the Western Pennsylvania Teamsters and Employers Pension Fund, the key is to limit the rate of growth in pension contributions to that equal to the rate of growth in the wages and salaries of their competitors, as illustrated with the UPS example.

If wages and salaries increase by 3% per year, as projected by the CBO, then employers in the Fund can increase their pension contributions by 3% and still remain competitive. Anything above that amount puts Fund employers at risk.

Summary and Conclusion

The findings presented in this report indicate that the Fund can expect a continued decline in the number of active participants through 2037, averaging from -2.14% per year to -2.63%. In addition, in order to stem the flow of employers out of the Fund, it will be necessary to reduce contribution increases to a rate consistent with projected wage growth – at this time, 3%.

Forecasting the future is a tricky business. The further out into the future we go, the greater the likelihood of some unforeseen event making our forecast too high or too low. This is especially so in forecasting the future number of active participants in the Western Pennsylvania Teamsters Pension Fund. The headwinds which are pushing down the numbers – the decline in union membership, the increased competition from non-union companies, the increased risk associated with the financial condition of the plan, and the decline in employment in certain occupational sectors may grow stronger as technological change expedites the substitution of man by machine (or computer). On the other hand, economic growth and the increase of e-commerce may provide a strong enough tail wind to keep the numbers from falling (or at least reduce the rate of decline.)

If anything, the uncertainties point to the importance of constant and careful evaluation of those factors affecting the solvency of the Fund.

Dr. Elizabeth A. Paulin

September 25, 2017

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POSITIONS HELD

Academic

August 1988 to present	Associate Professor of Economics La Salle University Philadelphia, Pennsylvania
August 1987 to May 1988	Assistant Professor of Economics Wellesley College Wellesley, Massachusetts
January 1987 to May 1987	Instructor in Economics Concordia Lutheran College Austin, Texas
January 1982 to May 1983; August 1984 to May 1986	Assistant Instructor, Economics University of Texas at Austin Austin, Texas

Administrative (La Salle University)

June 1, 2012 to present	NCAA Faculty Athletic Representative
May 2004 to May 2008	President, Faculty Senate
July 1998 to July 2006	Interim Chair, Department of Political Science
February 2003 to August 2003	Interim Chair, Department of Economics
July 1993 to July 1998	Director, Women's Studies Program

AREAS OF SPECIALIZATION

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Labor Economics

Teaching

Econometrics
Statistics
Macroeconomic Theory

PROFESSIONAL ACTIVITIES

Publications

Elizabeth A. Paulin. 1999. "Wage Determination" and "Human Capital," in **Encyclopedia of Political Economy,** ed. Phillip Anthony O'Hara. London: Routledge, 464-467 and 1233-1236.

Elizabeth A. Paulin. 1998. "The Seditious Dissent of Barbara Bergmann," in **Economics and its Discontents**, eds. Richard P.F. Holt and Steven Pressman. Cheltenham, UK: Edward Elgar Publishing Limited, 1-20.

Elizabeth A. Paulin and Jennifer M. Mellor. 1996. "Gender, Race and Promotions within a Private Sector Firm." **Industrial Relations**, Vol. 35, No.2, 276-295.

Jennifer M. Mellor and Elizabeth A. Paulin. 1995. "The Effects of Gender and Race on Salary Growth: The Role of Occupational Structure in a Service Sector Firm." **Eastern Economic Journal**, Vol. 21, No. 3, 375-92.

Ray Marshall and Beth Paulin. 1987. "Employment and Earnings of Women: Historical Perspective," in **Working Women: Past, Present, Future**, IRRA series, eds. K.S. Koziara, M.H. Moskow, and L.D. Tanner, 1-36. Washington D.C.: Bureau of National Affairs.

Ray Marshall and Beth Paulin. 1984. "The Employment and Earnings of Women: The Comparable Worth Debate," in **Comparable Worth: Issues for the 80's -- A Consultation of the U.S. Commission on Civil Rights**, Vol. 1, 196-214. Washington D.C.: Government Printing Office.

Selected Paper Presentations

"Social Security Reform and Inequality Among Elderly Women". Presented at the *Fifty-Fourth International Atlantic Economic Conference*, Washington, D.C., October 2002.

"The Effects of Gender and Race on Promotion and Salary Growth," with Jennifer M. Mellor. Presented at the *Twentieth Annual Convention of the Eastern Economics Association,* Boston, Massachusetts, March 1994.

"Is No News Good News? Earnings Inequality Among Women: 1967- 1988," (version 2) with Marcia J. Van Wagner. Presented at the *67th Annual Conference of the Western Economics Association,* San Francisco, California, July 1992.

"The Impact of Race and Gender on Promotion with a Large Financial Services Firm," with Jennifer M. Mellor. Presented at the *Eighteenth Annual Convention of the Eastern Economics Association,* New York, New York, March 1992.

"The Determination of Women's Work and Wages: A Power Oriented Approach." Presented at the *Sixteenth Annual Convention of the Eastern Economics Association,* Cincinnati, Ohio, March 1990.

Selected Consulting

Expert Witness, IAFF Local 713, Easton, Pennsylvania, Act 111 Arbitration Hearing, January 2017.
Collective Bargaining Consultant, IAFF Local 1664, Montgomery County, Maryland, 2016.
Collective Bargaining Consultant, Fraternal Order of Police Lodge #35,Montgomery County, Maryland, 2015 and 2016.
Expert Witness, IAFF Local 735, Bethlehem, Pennsylvania, Act 111 Arbitration Hearing, May 2015.
Expert Witness, Pittsburgh Fraternal Order of Police, Lodge #1, Act 111 Arbitration Hearing, April 2015.
Expert Witness, Allegheny County Police Association, Act 111 Arbitration Hearings, April 2015.
Expert Witness, Philadelphia Fraternal Order of Police, Act 111 Arbitration Hearings, 2008, 2009, 2012, and 2014.
Expert Witness, Moon Township Police Association, Act 111 Arbitration Hearings, 2014.
Expert Witness, United Police Society of Mt. Lebanon, Act 111 Arbitration Hearings, 2011 and 2014.
Expert Witness, Caln Police Officers Association, Act 111 Arbitration Hearings, 2013.
Collective Bargaining Consultant, Lower Merion Fraternal Order of Police, Lodge #28, 2012.
Expert Witness, Fraternal Order of Police, Lodge #85 (Capitol Police), Act 111 Arbitration Hearings, 2012, 2016.
Expert Witness, IAFF Local 319, Lancaster, Pennsylvania, Act 111 Arbitration Hearings, 2012.
Expert Witness, Chester Fraternal Order of Police, William Penn Lodge #19, Act 111 Arbitration Hearings, 2011.
Expert Witness, Lancaster City Police Officers Association, Act 111 Arbitration Hearings, 2011.
Expert Witness, Phoenixville Police Association, Act 111 Arbitration Hearings, 2011.

Journal Referee

American Sociological Review
Feminist Economics
Industrial Relations
Journal of Income Distribution

Selected Community Consultation/Activities

President, Board of Directors, The Germantown Cricket Club, a $4 million 501(c)(7), November 2009 to November 2012.

Treasurer, Board of Directors, The Germantown Cricket Club, November 2005 to November 2009.

Member, Budget and Finance Committee, USTA Middlestates Tennis Association, June 2007 to June 2009.

Member, Coalition for the Welfare of Women and Children, January 1995 to 1998.

Member, Philadelphia Pay Equity Committee (a.k.a. PhilaPEC), Women's Alliance for Job Equity, June 1989 to 1996.

Member, Neighborhood Services Review Committee, United Way of Southeastern Pennsylvania, 1989 - 1991.

Affiliations

American Economic Association
Committee on the Status of Women in the Economics Profession
Eastern Economic Association
Omicron Delta Epsilon (Economics Honor Society)

AWARDS AND HONORS

Research Grant, La Salle University, 3-year course reduction grant, Fall 2014 through Spring 2017: for research on public sector employment and compensation.

Research Leave, La Salle University, Fall 2008.

Faculty Distinguished Service Award, La Salle University, 2007.

Summer Grant, La Salle University, 1993: for the completion of two research papers, "A Comparative Analysis of Salary Growth Within Two Divisions of a Financial Services Firm: The Role of Gender and Race," and "The Racial Dimensions of Earnings Inequality Among Women."

Research Leave, La Salle University, Fall 1992: for the completion of "Labor Force Attachment, Occupational Distribution, and Earnings Inequality Among Women" with Dr. Marcia J. Van Wagner and "Gender, Race, and Promotions Within A Private Sector Firm" with Ms. Jennifer M. Mellor (accepted for publication in *Industrial Relations).*

Summer Grant, La Salle University, 1991: for the completion of a paper on pay equity and continued empirical research on earnings inequality among women.

Course Reduction Grant, La Salle University, Fall 1990: in order to do a comparative analysis of the three major labor market theories (orthodox, institutional, and radical) as they attempt to explain and/or predict the direction of women's work and wages.

Summer Grant, La Salle University, 1990: in order to begin work on (1) the empirical testing of several hypotheses generated in a previously written paper, "The Determination of Women's Work and Wages: A Power-Oriented Approach," and (2) a review of the literature on women's work and wages, covering orthodox, institutional, and radical economic theories.

Summer Grant, La Salle University, 1989: to complete a paper entitled "The Determination of Women's Work and Wages in Primary Firms: A Power-Oriented Approach," and to begin work on an empirical project with a colleague from Mount Holyoke College (testing for differences in wage discrimination between the four types of employment subsystems typically used by firms to structure their internal labor markets).

SELECTED UNIVERSITY ACTIVITIES

Faculty Senate and Standing Committees

Member, Faculty Senate, May 2012 to current.

Member, University Curriculum Committee, August 2009 to 2013.

President, Faculty Senate, May 2004 to May 2008.

Representative to University Council, Faculty Senate, May 1994 to May 1996, and May 2002 to May 2008.

Member, Graduate Council, August 1996 to May 2000

Secretary and Member of the Executive Committee, Faculty Senate, May 1993 to May 1994.

Member, Leaves and Grants Committee, August 1992 to May 1995.

Member, Athletic Committee, August 1989 to May 1992.

Other Boards and Committees

Faculty Representative, Student Experience Committee, La Salle University Board of Trustees, current.

Member, La Salle University Strategic Planning Committee, current.

Member, La Salle University Financial Affairs Planning Committee, current.

Member, La Salle University Presidential Search Committee, Fall 2014.

Member, Planning Advisory Board, Fall 2006 to May 2008.

Chair, Search Committee: Political Science Department Chair, Fall 2004 to Spring 2005 and Fall 2006 to Spring 2007.

Member, Vice-President for Business Affairs Search Committee, Spring 2005.

Member, Middles States Task Force (VII), Spring 2004 to Spring 2006.

Member, Dean of Arts & Sciences Search Committee, Fall 2001 to Spring 2003.

University Representative, Philadelphia Women's Studies Consortium, Fall 1993 to 1998.

Member, Ad Hoc University Council FASB 106 Committee, April 1995 to September 1995.

Co-chair, Provost Search Committee, Spring 1995.

Member, Ad Hoc Senate Committee on the Faculty Contract, Summer 1994.

Member, Women's Studies Board, Summer 1991 to 2002.