MIAMI-DADE COUNTY PUBLIC SCHOOLS (FLORIDA)

SUMMARY

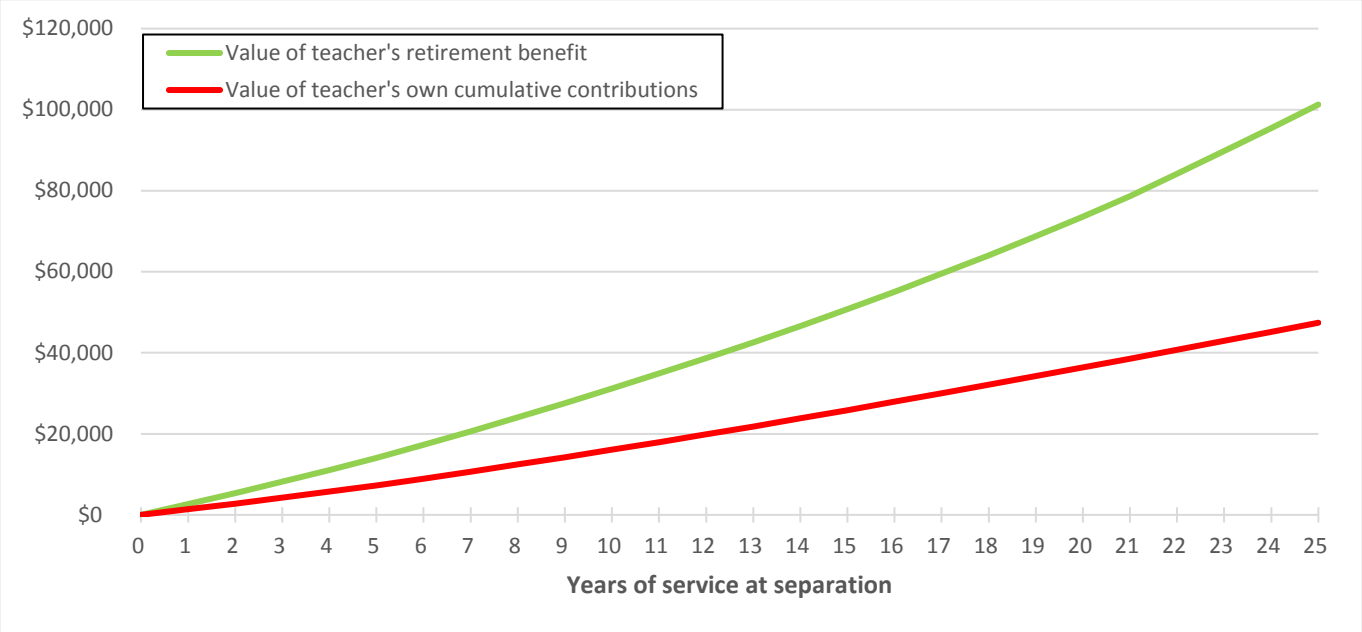
Miami-Dade County Public Schools teachers can enroll in the Florida Retirement System (FRS) Investment Plan, a defined contribution plan. There is no crossover point for this plan because, under a defined contribution plan, benefits are solely based on an individual teacher's retirement account balance, equal to her and her employer's contributions plus interest and investment earnings. A teacher's benefit is worth more than her cumulative contributions, and her net benefit is positive and grows the longer she stays.[1] At the same time, she bears no penalty for separating with only a few years of service and moving her investment elsewhere. (Miami-Dade teachers may choose the FRS Pension Plan, a traditional defined benefit plan, rather than the FRS Investment Plan. There is also a Hybrid Option for the Investment Plan.)

About the District	
Students	356,233
Teachers (FTE)	20,527

About the Retirement Plan	
Type	Defined contribution
Coverage	Public employees
Active members	622,089
Total members	985,123

Sources: Enrollment: NCES (2013–14). Retirement plan membership: Florida Retirement System Pension Plan and Other State Administered Systems Comprehensive Annual Financial Report (membership as of June, 2014; includes members of all FRS plans)

Figure 1: A new teacher in Miami-Dade County who chooses the DC plan realizes a return on her contributions immediately, and her net benefit grows over time.



Note: Calculations assume inflation to be 2.5 percent, the real interest rate to be 2.5 percent, return on investments to be 5.0 percent, and a female teacher first hired in FY13 with an entry age of 25.

Take a look at Figure 1. The red line is the value of a teacher's cumulative contributions should she separate from the system after a given number of years of service.[2] The green line is the value of her lump-sum retirement benefit should she separate from the system at a given time. Said another way, her benefit is equal to the balance of her retirement account at the time she separates: all of her contributions, the portion of the employer contributions in which she is currently vested, and the earnings on those contributions (interest and increased investment value). Because we assume a constant 5 percent return on investment, the balance of her retirement account accrues in a fairly smooth manner over time.

For a Miami-Dade County teacher who selects the defined contribution plan, there is no crossover point—her retirement benefit (green line) is always worth more than her cumulative contributions (red line), and her "net benefit" (the difference between the two) is always positive. She does not have to work a specified number of years in order to receive the balance of her retirement account, or to transfer it to another system. Said another way, she can separate from the system at any time without incurring a financial penalty. Exact figures can be found in Tables 1 and 2.

Let's take a look at how this plays out should a teacher choose to separate from the system at different points.

WHAT IS THE CROSSOVER POINT?

This study asks: how long must a new teacher wait until the value of her retirement benefits exceeds the value of her contributions (the "**crossover point**")?[3] A new teacher begins contributing a percentage of her salary to her retirement system the day she receives her first paycheck. The idea is that, over her career, she and her employer will make contributions to prefund her benefit and, when she leaves the system, she receives retirement benefits. The total benefit the teacher receives after she leaves depends on the plan's parameters and provisions, among other factors.

In a traditional **defined benefit** (DB) plan, retirement benefits take the form of pension payments made periodically for the rest of her life after retirement. The pension benefit is based on a formula: the number of years of service in the system, multiplied by an average of her final years' salaries, times an accrual factor, which is a percentage generally around 1 percent to 2.5 percent. In order to receive any retirement benefits, a teacher must be vested in the system, meaning she has stayed long enough that she's eligible for a pension when she leaves. Vesting periods generally range from three to 10 years. A teacher can only begin to receive benefits once she reaches retirement eligibility**,** a condition usually determined by some combination of the teacher's age and years of service.[4] The *total* value of the retirement benefit the teacher receives under a DB plan—her **pension wealth**—depends on the yearly benefit, plus her age at retirement and life expectancy.[5] Before the crossover point in a DB plan, a teacher's expected lifetime retirement benefit is worth less than what she contributed over her career. After the crossover point, her benefit is worth more than what she contributed. The longer it takes a new teacher to reach the crossover point, the longer it takes for her to realize any return on her contributions.

In a **defined contribution** (DC) plan, retirement benefits are equal to what the retirement account is worth: her and her employer's contributions, plus any gains (or losses) from investment performance over time. She typically can transfer the balance of her account to another retirement system, withdraw it completely as a lump-sum amount, or draw down balances as periodic payments (less taxes, should she leave early). In a DC plan there is no crossover point, and the value of her benefits will always be greater than her contributions (assuming the investment gained value over time).

A **hybrid plan** combines elements of both DB and DC plans. A teacher's total benefits are equal to the balance of her retirement savings account plus whatever pension benefits she is eligible for. Depending on the specific terms of the plan, there may or may not be a crossover point.

In all three cases, to calculate the crossover point we compare the value of a teacher's contributions with her expected benefits.[6] While the concept of retirement "benefits" implies a positive return on contributions, the analyses presented in this study show that, in order to reach the crossover point and receive a true benefit, new teachers in many of the nation's largest districts must remain in their retirement system for 20 or 30 years—or more. These teachers, usually enrolled in traditional DB plans, are financially penalized if they leave at any point before the crossover. Moreover, they cannot enroll in a different system that would give them larger, or more short-term, benefits. New teachers in DC plans, and most of the hybrid plans we consider, do see a return on their contributions even early in their career.

EARLY CAREER

A Miami-Dade County teacher who selects the DC plan is always eligible to receive her contributions plus investment earnings on those contributions. She must stay **one year** until she is vested into the entire employer contribution, meaning after one year her benefit also includes the employer contribution plus investment earnings. Say she leaves after three years. At this point, the value of her contributions is $4,234 and the balance of her retirement account is $8,193. Her net benefit (benefit minus contributions) is $3,958.

Table 1. At key points in a teacher's career, what is the value of her retirement benefit? What is the value of her contribution? And what is the difference between the two?

Age	Years of Service	Value of teacher's pension benefit (A)	Value of teacher's cumulative contributions to date (B)	Net benefit (A-B)
28	3	$ 8,193	$ 4,234	$ 3,958
40	15	$ 50,763	$ 25,843	$ 24,919
50	25	$ 101,261	$ 47,411	$ 53,850

MID-CAREER

Although there is no financial penalty for leaving the system early—under the DC plan, a Miami-Dade County teacher's net benefit is always positive—the net benefit increases the longer she stays. Say she separates from the system after 15 years—the average experience of a teacher who leaves the profession.[7] At this point she has contributed a total of $25,843 to the account, and her retirement benefit is worth $50,763; her benefits are worth about double her cumulative contributions. However, a Miami-Dade County teacher's net benefit at this point is small relative to teachers in some other states enrolled in DC plans, and remains so later on through her career, because the employee and employer contribution rates are comparatively low.

AFTER 25 YEARS OF SERVICE

A 25-year career is longer than most teachers' careers—fewer than one out of four teachers nationwide stays more than 20 years.[8] Should a Miami-Dade County teacher who selects the DC plan stay 25 years, the balance of her retirement account has had more time to grow. Her contributions are worth $47,411, and the value of her retirement account is now $101,261.

Bottom line: In this defined contribution plan, there is no penalty for leaving early, nor an incentive to quit earlier or stay longer than a teacher desires. A Miami-Dade County teacher who opts for the state's defined contribution plan can separate from the system at any point and her retirement benefit will be worth more than her contributions. She can always leave without financial penalty, and she is free to transfer the balance of her retirement account to another system. The DC plan is portable and offers a chance for Florida teachers to save toward a secure retirement and choose the plan that fits their own life circumstances, career goals, and preferences.

Retirement System

A teacher working in Miami-Dade County can opt for the Florida Retirement System (FRS) Investment Plan, a defined contribution plan in which a teacher's retirement benefit is equal to her account balance when she separates from the system. Miami-Dade teachers may choose the FRS Pension Plan, a traditional defined benefit plan, rather than the FRS Investment Plan. There is also a Hybrid Option for the Investment Plan.

Plan Provisions by the Numbers

Eligibility for retirement benefits

- Vesting requirement: Teachers immediately vest in their own contributions plus investment earnings, and vest in employer contributions plus investment earnings after one year.
- Retirement eligibility: no age or years of service requirements. Teachers may withdraw the balance of their retirement account at any time.

Employer and employee contributions

- Employee contribution rate: 3 percent of salary
- Employer contribution rate: 3.3 percent of salary

Summary of Plan Provisions

Upon leaving the retirement system, a Miami-Dade County teacher receives the balance of her personal retirement account: her own contributions plus investment earnings, and all of the employer contributions plus investment earnings. There are no age or years of service requirements for retirement. After entering service, a teacher vests in (or is eligible to receive) her own contributions immediately, and those of her employer after one year of service.

The employer contribution rate is set at 3 percent of earnings. The employee contribution rate is set at 3.3 percent of earnings.

Miami-Dade teachers do pay into Social Security.

Assumptions for Computing Retirement Benefit

Note: For DC plans, retirement benefit is equal to the balance of the teacher's retirement account

- Entry age: 25 years old
- Gender: female
- Teacher has bachelor's degree for first five years; master's degree for the remainder[9]
- Teacher salary schedule for 2012–13 school year[10]
- Member contributions to retirement savings accounts = minimum (required) amount
- Overall rate of return: 5 percent (2.5 percent inflation, 2.5 percent real interest rate)

Sources: Teacher salary schedule is from district website (or requested directly from the district where required). The salary schedule is supplemented by the district collective bargaining agreement and/or teacher work rules for the 2012–13 school year where applicable/necessary.[11] Retirement plan parameters are primarily taken from a database assembled by the National Council on Teacher Quality, and supplemented where necessary with information from plan documents.[12]

Table 2: Benefits, contributions, and net benefit for a representative new teacher in Miami-Dade County Public Schools

Age	Years of Service	Value of teacher's retirement benefit (A)	Value of teacher's cumulative contributions to date (B)	Net benefit (A-B)
25	0	$ 0	$ 0	$ 0
26	1	$ 2,663	$ 1,375	$ 1,288
27	2	$ 5,393	$ 2,786	$ 2,607
28	3	$ 8,193	$ 4,234	$ 3,958
29	4	$ 11,061	$ 5,718	$ 5,343
30	5	$ 14,009	$ 7,239	$ 6,771
31	6	$ 17,274	$ 8,931	$ 8,343
32	7	$ 20,624	$ 10,661	$ 9,963
33	8	$ 24,059	$ 12,427	$ 11,633
34	9	$ 27,582	$ 14,229	$ 13,353
35	10	$ 31,195	$ 16,070	$ 15,125
36	11	$ 34,898	$ 17,947	$ 16,951
37	12	$ 38,695	$ 19,863	$ 18,831
38	13	$ 42,585	$ 21,818	$ 20,768
39	14	$ 46,562	$ 23,811	$ 22,752
40	15	$ 50,763	$ 25,843	$ 24,919
41	16	$ 55,056	$ 27,916	$ 27,140
42	17	$ 59,525	$ 30,004	$ 29,521
43	18	$ 64,069	$ 32,108	$ 31,961
44	19	$ 68,780	$ 34,231	$ 34,550
45	20	$ 73,614	$ 36,372	$ 37,242
46	21	$ 78,663	$ 38,534	$ 40,129
47	22	$ 84,154	$ 40,718	$ 43,436
48	23	$ 89,748	$ 42,924	$ 46,824
49	24	$ 95,449	$ 45,155	$ 50,294
50	25	$ 101,261	$ 47,411	$ 53,850

Pension wealth, contributions, and net pension wealth for a female teacher who begins teaching at age 25. Ex: After her fifth year of service, her pension benefits are worth $14,009 (A) and her cumulative contributions are worth $7,239 (B). Her net pension wealth accrued at this point is $6,771, which is her pension wealth minus her cumulative contributions (A-B). All values are adjusted for inflation.

ENDNOTES

1 In practice, it is possible that investment returns over some period of time are sufficiently negative such that a teacher's net benefit could also be negative. However, in the long run, net benefit is likely to be positive (especially if it factors in employer contributions). For this description, we assume a positive long-term net benefit.

2 "Contributions" here and throughout refer to the value of a teacher's total contributions—the amount she contributes, grown by each system's assumed rate of return.

3 Results are based on the retirement plan's rules as they apply to new hires who began in FY13. Provisions for state-covered plans were obtained from the National Council on Teacher Quality pension database (http://www.nctq.org/statePolicy/2015/nationalFindings.do?policyIssueId=4&masterGoalId=22).

4 A vested teacher who leaves a DB pension plan before reaching retirement eligibility faces a choice: She can leave her contributions in the pension fund and wait until she reaches retirement age to receive benefits. Or she can "cash out" and immediately receive a refund of what she has contributed up to that point, sometimes with interest. In rare cases, refunds may also include some or all of the employer contributions, potentially with interest, depending on the terms of the plan and whether the teacher is vested. There are also exceptions where a refund benefit is actually less than what the teacher put in. For instance, Illinois keeps 1 percent of earnings for survivor benefits (see https://trs.illinois.gov/members/pubs/tier2guide/Refunds.pdf).

5 Pension wealth is the total expected value of a teacher's yearly stream of pension payments over her lifetime, discounted back to the present and accounting for life expectancy, conditional on the age of separation. See Appendix B.

6 The value of a teacher's contribution is the employee's required payment into the retirement system, grown by each system's assumed rate of return.

7 S. Provasnik and S. Dorfman, Mobility in the Teacher Workforce (Washington, D.C.: NCES, 2005), http://nces.ed.gov/pubs2005/2005114.pdf.

8 NCES, Digest of Education Statistics, Table 209.10, http://nces.ed.gov/programs/digest/d14/tables/dt14_209.10.asp.

9 According to the Beginning Teacher Longitudinal Study, 80 percent of beginning teachers had a bachelor's degree. See NCES, Beginning Teacher Longitudinal Study, http://nces.ed.gov/surveys/btls/cohort.asp (accessed October 30, 2016). Additionally, given that about 55 percent of the current teaching workforce has a master's degree or higher, but approximately 21 percent of current teachers have five or fewer years of teaching, the analysis assumes that a teacher who remains five years will have a master's degree by that point.

10 "Professional growth" credits are not included in salary calculations. First, they cannot be applied uniformly across districts: one district may give teachers a salary increase when they earn, for example, 10 credits, while another may specify a salary increase at 20 credits. Second, there are no data available as to the rate at which teachers earn salary credits throughout their career. As others have demonstrated, however, the provisions governing public pension plans will be the primary determinants of benefit accrual patterns (see R. Costrell and M. Podgursky, "Peaks, Cliffs, and Valleys: The Peculiar Incentives in Teacher Retirement Systems and their Consequences for School Staffing," Education Finance and Policy 4, no. 2 (2009), 175–211). Variation in a teacher's earnings path, such as that just described, will likely have limited impact on pension wealth accrual patterns or the timing of the crossover point.

11 For example, some districts specify longevity payments in the contract instead of in the salary schedule.

12 NCTQ, "2015 Pension Flexibility," http://www.nctq.org/statePolicy/2015/nationalFindings.do?policyIssueId=4&masterGoalId=22. Some plan parameters were also independently verified using the Urban Institute's State and Local Employee Pension Plan Database (http://apps.urban.org/features/SLEPP/data.html).