

Closing the Gender Wealth Gap in New York City

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Disclaimer

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Honor Pledge

On my honor as a student, I have neither given nor received aid on this assignment.

Sarah Tmimi

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Executive Summary

The gender wealth and asset gaps pose a substantial threat to women's ability to live financially secure lives in New York City. On average, women in New York City have about \$68,000 less in net wealth compared to men. Wealth is a function of a person's assets minus their debt. Women have fewer assets than men but they also have less debt, meaning the gender disparity in wealth is primarily driven by women's lack of assets. Of all assets, the lack of savings among women is most significantly contributing to the gap, with women having 20% less in retirement savings compared to men with the same amount of income.

This report seeks to contribute to the New York City Commission on Gender Equity's work in defining and closing the gender wealth gap in New York City, a goal of the Committee set forth in their strategic plan for 2018-2021. This analysis focuses on policy options the City can undertake to stimulate saving among New Yorkers in an effort to reduce saving inequity between men and women and, in turn, tackle the wealth and asset gaps. Using the criteria of (1) Cost-Effectiveness Analysis, (2) Equity, (3) Political and Administrative Feasibility, I assess the following policy options:

1. Status Quo
2. Mandated Automatic Enrollment in Employer-Sponsored Retirement Plans
3. Individual Development Accounts
4. Universal Baby Bonds

I recommend the Commission on Gender Equity propose mandated automatic enrollment in employer-provided retirement plans, as it is the most cost-effective and politically and administratively feasible option. However, in an effort to minimize the trade-off between cost-effectiveness and equity, I also recommend that the Commission on Gender Equity propose piloting an Individual Development Account program when funding becomes available. Additionally, the City should invest in more data collection.

Problem Statement

Women in New York City have almost \$68,000 less in net wealth, on average, compared to men, with significant variation in wealth among women of different racial groups, ages, immigration statuses, and education levels¹. While the gender wealth gap nationally is a result of women having both fewer assets and more debts (McCulloch, 2017), the wealth gap in New York City is primarily driven by a difference in assets. *On average, women in New York City have almost \$80,000 less in assets compared to men*, but they also have less debt. In large part, women in New York City lacking savings comparable to men drive this asset differential; *controlling for income, women have 20% less in retirement savings compared to their male counterparts*. In total, this wealth and asset differential between men and women raises concerns about women's access to economic mobility and opportunities to live financially secure lives.

New York City Commission on Gender Equity

Mayor Bill de Blasio established the Commission on Gender Equity (CGE) to address the inequities facing girls, women, and transgender and gender non-binary (TGNB) people (New York City, 2018). CGE was tasked with: (1) studying the state of inequalities faced by women, girls, and TGNB people within New York City, (2) advising on ways to analyze City agencies through a gender-based lens, (3) recommending to the Mayor and City Council ways to reduce gender-based inequality, and (4) reporting annually to the Mayor on its past activities and future goals (New York City, 2018).

In order to fulfill its purpose, CGE released a strategic plan for 2018-2021. Within this document, CGE set out to operate under the principles of (1) recognizing the diversity of gender, (2) using an intersectional lens to analyze and address inequality, and (3) leading as a city in the development and implementation of gender-equitable practices (New York City, 2018). With the goal of ensuring that people of all gender identities have access to economic mobility and opportunity, the strategic plan listed defining and closing the gender asset and wealth gap as a key priority (New York City, 2018).

This report seeks to contribute to CGE's goals around the gender wealth gap by defining the magnitude of the gender asset and wealth gaps, identifying factors that contribute to the gender asset and wealth gaps in New York City, and recommending how the City government can work to alleviate this inequality.

¹ All New York City wealth, asset, and debt estimates are the author's calculations using the Center on Poverty and Social Policy's Poverty Tracker data (2014).

Why Wealth Matters

Wealth is a measure of financial well-being that differs from income. While income is a flow of money, typically earned from labor, wealth is a stock of an accumulation of assets (including cash savings, stocks, bonds, and home, business, and real estate equity) minus debts (including mortgage, credit card, medical, and educational debts) (McCulloch, 2017).

$$\text{WEALTH} = \text{ASSETS} - \text{DEBTS}$$

Wealth is an important aspect of financial well-being to consider because it can be a safety net that people build for themselves to tap into during emergencies or whenever they leave the labor market. One measure the Federal Reserve uses to assess a person's financial security is whether they have enough money to cover an unexpected \$400 expense; when surveyed, one-third of New Yorkers indicated that they would be *completely* unable to afford an unforeseen \$400 expense by any means (Cargill et al., 2019). Moreover, racial disparities exist across the income distribution on New Yorkers' ability to handle a \$400 expense. The difference is most pronounced among those who are low-income: 63% of White non-Hispanic low-income people can pay a \$400 emergency expense in cash while only 31% of Black and 28% of Hispanic low-income New Yorkers could pay the same expense (Cargill et al., 2019). Overall, this illuminates a general theme of financial insecurity and lack of access to assets among those who live in New York City, regardless of gender.

Wealth inequality with respect to gender is especially important to consider because women's connection to the labor market, and therefore asset building opportunities, has historically differed from that of men. Men have always had stronger labor force attachments than women, and this trend continues today. Defining "strong" workforce attachment as those with full-time, year-round earnings records for at least 12 to 15 years, we see that women's strong labor force attachments have remained low (Rose & Hartmann, 2018). Compared to 59% of men, only 28% of women had strong labor force attachments in the years 2001-2015. From 2001-2015, 29% of women had a moderate connection to the labor force, meaning they had less than 12 years of full-time, year-round work, and 43% had weak labor force participation, meaning they had at least one year without earnings (Rose & Hartmann, 2018).

Altogether, this demonstrates that a majority of women are entering and exiting the labor force regularly. These weak labor force attachments are of particular concern to women's financial security because women face higher penalties than men for leaving the labor force (Rose & Hartmann, 2018). With less consistent attachment to the labor market and fewer assets from income, it is more difficult for women to

build a safety net for themselves. This is of particular concern because women are more likely to leave the labor force due to unpaid caregiving responsibilities. Despite being understudied, the ability for women to build wealth over a lifetime and experience financial security and economic mobility is important for women and their families, the strength of communities, and the nation as a whole (McCulloch, 2017).

Wealth Inequality

Political movements such as Occupy Wall Street, politicians such as Bernie Sanders and Elizabeth Warren, and books such as Thomas Piketty's *Capital in the 21st Century* have drawn increased attention to wealth inequality, with particular attention being brought to the stark divide between the "1 percent" and the other "99 percent" (Christiansen & Jensen, 2019). While wealth inequality in general is discussed more frequently, the gendered aspect of it remains on the periphery. Further, when the gendered aspect of wealth inequality is referenced, it is largely focused on the effect marriage has on women's wealth accumulation. Overall, women who are married and stay in their marriages have greater wealth accumulation than women who never marry or who have more instability in their marital status (Addo & Lichter, 2013). In addition to the gap among women by marital status, a wealth gap also exists between married couples and couples who have never married (Ruel & Hauser, 2013).

Defining Intersectionality

One of the principles of CGE is to use an intersectional lens to analyze and address inequality. Intersectionality is a term coined by legal scholar Kimberlé Crenshaw in 1989. The theory of Intersectionality sheds light on the interlocking nature of oppressions, and asks that when addressing one form of inequity we examine others as well (Coaston, 2019). For example, when dealing with gender inequality in this analysis, we must also consider how classism, racism, homophobia, and transphobia intersect with this gendered issue.

While the gap in wealth between men and women has been documented, women are not a monolithic group and multiple identity categories interact to impact a person's opportunities for wealth building. Wealth inequality is perpetuated, in part, by the way that it can be transferred and inherited within a family. Although it is difficult to gain data on inheritances, some estimates show that as much as 80% of assets are inherited (Jaggar, 2008; Keister & Moller, 2000). While women in the United States do not receive different inheritances compared to men (Ruel & Hauser, 2013), the ability for wealth accumulation through inheritances are also influenced by the other identity categories a person may possess, namely race. It is estimated that, compared to people of color, White people are almost five times more likely to receive an inheritance, and that inheritance will have three times more value than when a person of color receives an inheritance (Jaggar, 2008). Further, Black women are less likely than White women to be married and stay

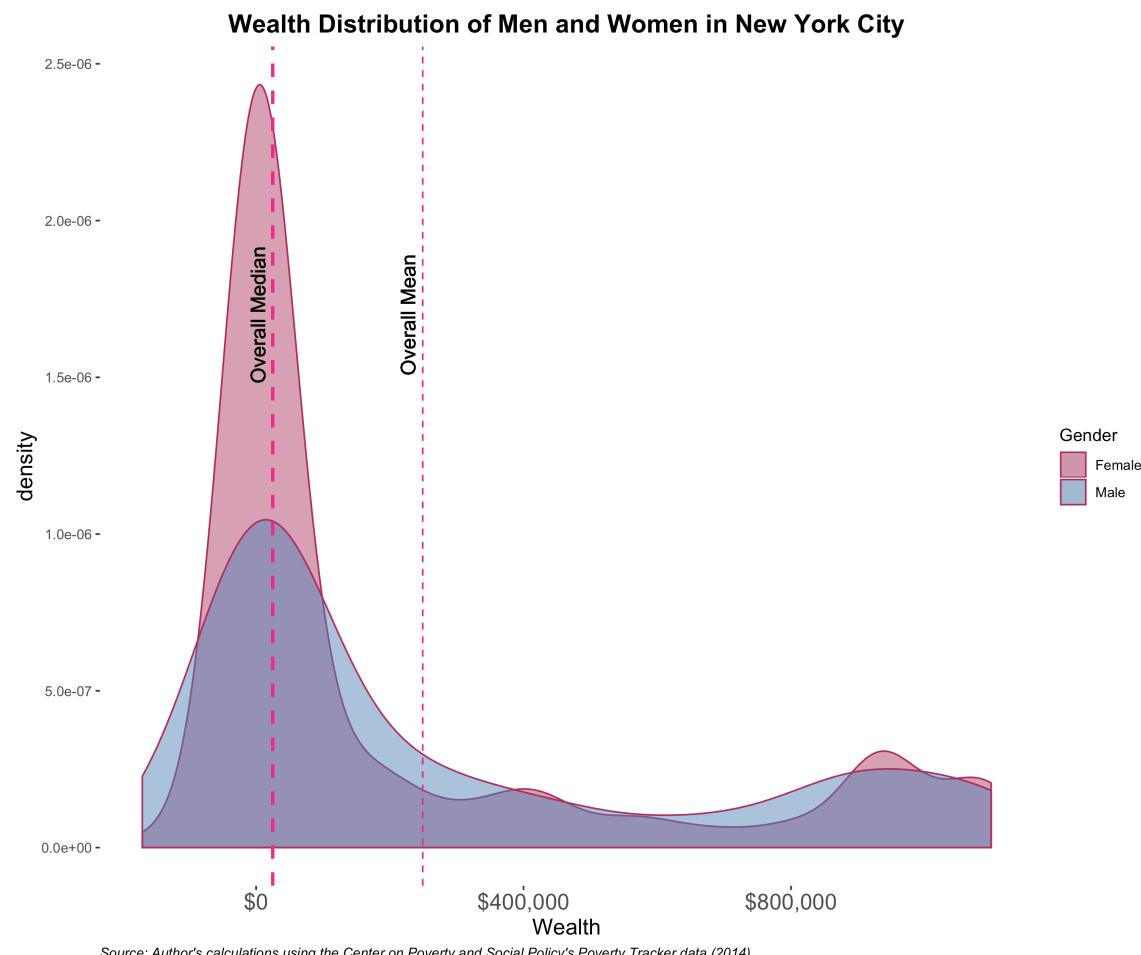
married, and across the wealth distribution, there is a racial gap in wealth among women. This is particularly pronounced at the lower end of the wealth distribution, where a woman's marital history is a more significant predictor of this wealth difference (Addo & Lichter, 2013).

Immigration status is also important to consider in wealth inequality. The ability to accumulate wealth can be thought of as a proxy for an immigrant's ability to integrate into the United States, and the possibility of achieving the "American Dream" of upward mobility (Painter II & Qian, 2016). Education completed in the United States, English language proficiency, and time living in the United States all contribute to immigrants' ability to build wealth. Additionally, immigrants who belong to racial and ethnic minority groups face additional barriers to creating wealth, and with all else equal, non-native born minorities have less wealth than their native-born counterparts (Painter II & Qian, 2016). It is especially important to consider wealth-building opportunities for immigrants in light of the recent public charge rule, which went into effect in February 2020, that determines eligibility of those applying for green cards or visa extensions based on their likelihood of being dependent on public support (Community Service Society, 2019). The expansion of this rule penalizes immigrants for legally using public benefits such as the Supplemental Nutrition Assistance Program (SNAP), parts of Medicaid, and housing assistance (Wimer et al., 2018). Additionally, one survey of New Yorkers found that 15% of immigrants in New York City have avoided using public programs, and that this rule will likely increase the number of New Yorkers living below the poverty line by as much as 5% (Wimer et al., 2018). Because this rule limits the access of immigrants to the government-provided social safety net, their ability to build their assets, and in turn their own safety-net, is of increasing concern.

Another dimension to consider is sexual orientation and gender identity; however, the experiences of those in the LGBTQ community are largely invisible in the wealth inequality literature. While there is little concrete data on the wealth of LGBTQ people, there is some knowledge on the financial instability of LGB people who can begin to illuminate inequities in wealth accumulation by sexual orientation. Unfortunately, data on transgender people is largely nonexistent. It has been shown that LGB people are more likely to be in poverty than their straight counterparts, with same-sex female couples having the highest poverty rates (Schneebaum & Badgett, 2019). Altogether, it is paramount to use an intersectional gender lens when considering women's wealth and asset accumulation possibilities, especially for women who belong to multiple minority groups and face compounding challenges to wealth building.

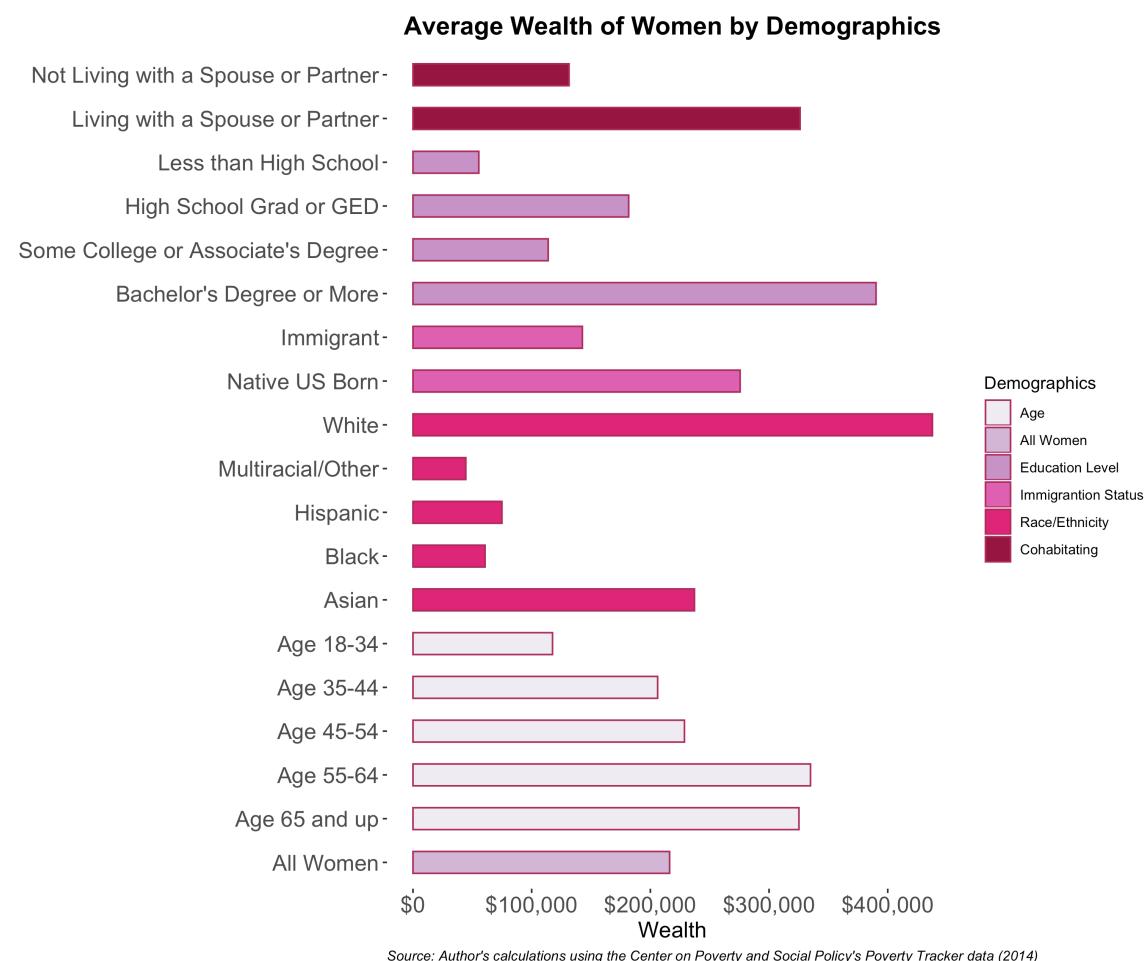
Characterizing the Gender Wealth Gap in New York City

According to the Center on Poverty and Social Policy's Poverty Tracker data (2014), the average New York City resident has about \$230,000 in wealth. While this average appears to show that New York City residents hold a substantial amount of wealth, outliers at the top of the wealth distribution lead to the mean wealth drastically over-exaggerating the level of financial security people experience. More representative of the everyday person, the median amount of wealth held by people in New York City is only \$15,000, displaying a much more concerning lack of wealth among people. Further, respective to both the mean and median, men fall above and women fall below those values, and at the 25th percentile of wealth, men and women both own *zero dollars*.



As shown above, there is a wide spread in the distribution of wealth for both men and women. Additionally, wealth holdings differ substantially *among* women. As one might imagine, wealth increases, on average, over the duration of a person's lifetime, with older women holding more wealth than younger women because they have more time to accumulate assets and pay off debts. White women have the largest share of wealth, with about \$433,000 of wealth on average; comparatively, Asian, Black, Latinx, and multi-racial women own 48%, 12%, 15%, and 10% of what

White women own, respectively. Further, immigrant women own only half of the wealth women born in the United States own. In general, those with more education have more wealth – compared to those with a Bachelor's degree, those with some college own 28% of the wealth of those with at least a Bachelor's degree, those with a high school diploma or the equivalent own 41% of the wealth that those with at least a Bachelor's degree own, and those with less than a high school diploma own only 11% of what those with at least a Bachelor's degree own.² Lastly, women that are not living with a spouse or partner own about 64% of the wealth of women who are cohabitating.



² Women with some college or associates degree have less wealth than those with a high school diploma or its equivalent because they have more debt, namely educational debt.

Contributing Factors to Asset Inequality

Income Gap

Income contributes to the stock of wealth available to a person, and holding inheritance constant, those who earn less will be able to accumulate less wealth over time. The gender wage gap is an aspect of gender inequality that gets a lot of attention from media outlets, lawmakers, and interest groups. Women systematically earn less than men and this contributes to the gender wealth gap. According to the 2012 American Community Survey, women in New York City who worked full-time earned only 82% of what men earn, on average (City of New York Office of the Comptroller, 2014). This gap differs throughout the age distribution; single, childless women below the age of 35 make about 96% of what their male peers earn, almost totally closing the gender wage gap, but for older women (those above the age of 35) the earnings gap is larger than the average, with women earning only 78% of what men earn (City of New York Office of the Comptroller, 2014).

Not only does the wage gap differ among women of different ages, it also differs substantially between women's racial and ethnic groups. National level data shows that compared to every dollar made by a White non-Hispanic man, Asian women are paid 90 cents³, Black women are paid 62 cents, Latinx/Hispanic women are paid 54 cents, Native American women are paid 58 cents, and White non-Hispanic women are paid 79 cents (National Partnership for Women and Families, 2019). These differences in earnings are important to consider because they contribute to the amount of money that women are able to save, which is the primary focus of this report. While this issue is clearly a major driver of the gender asset gap, CGE has already invested efforts into closing the wage gap separate from the asset and wealth gap. Therefore, decreasing income inequality is not a dimension of this problem that will be addressed by this paper.

Savings Gap

Savings are an important part of asset building. As discussed above, assets help people create safety nets for themselves, and having savings to use throughout one's life is an important dimension of creating a safety net. Savings for retirement can be thought of as a three-legged stool, with the three legs of saving being employer-provided retirements (i.e. pensions and contributions), Social Security, and personal savings (McCulloch, 2017). Across all types of savings, women have lower amounts of savings compared to men (McCulloch, 2017). This inequality in the amount of savings between men and women is of particular concern because women tend to live longer than men, and therefore need more savings for later in their lives (McCulloch, 2017).

³ There is variation among Asian sub-groups that fare much worse than the average Asian American woman.

One of the reasons that women have less retirement savings than men is a product of the income gap; if they are earning less, less money is contributed to their employer-sponsored savings plans. In terms of employer-sponsored retirement savings, an employer can provide either a defined benefit (DB) or defined contribution (DC) plan. DB plans are most commonly seen as pension plans. Using a formula that includes time spent working for an employer and a fixed percentage of income, an employer invests these funds and then pays a steady income to their employees after they have retired (Brown et al., 2016). DC plans differ from DB plans in that the risk lies with the employees, not the employers, and there is no guarantee of income into retirement (Brown et al., 2016). DC plans are typically seen in the form of 401(k) plans, where employees contribute to an account, which they manage for themselves, and typically employers will provide a match rate for employee contributions (Brown et al., 2016). In the private sector, employers have shifted away from DB plans and moved to DC plans, requiring employees to be responsible for their own financial futures.

Overall, women have less retirement savings than men, both in DB and DC plans (Brown et al., 2016). First, as stated above, if women earn less, they are able to save less in a DB plan or receive less from employer match rates in DC plans. Furthermore, because women are more likely to be disconnected from the workforce due to caregiving responsibilities, and because they are more likely to work part-time, they are either not eligible for their employer-provided plan or are losing out on maximizing contributions (Brown et al., 2016). Overall, women contribute less to DC plans and women of color are also less likely to participate in employer-sponsored DC plans at all (Brown et al., 2016).

In terms of personal savings, there are barriers that keep low-income people from accumulating assets through savings. First, personal savings accounts, such as Roth Individual Development Accounts (IRAs), have complicated processes and fees that discourage people from opening up accounts (McCulloch, 2017). Further, it is particularly difficult for low-income people to save, because their primary priority is to cover the costs of basic needs, and typically, they are only able to save for very short-term goals or emergencies (Klawitter et al., 2012).

Financial Literacy and Risk Preferences

Financial literacy is defined as a person's ability to understand economic information and make an informed decision about their financial future (Lusardi and Mitchell, 2014). Financial literacy and risk preference play a large role in women's ability to both save and invest – the focus on investing is of particular importance for DC savings plans, which require more financial knowledge on the part of the employee. On average, there are low levels of financial knowledge among all Americans, but women in particular are found to have less financial knowledge and to generally be more risk-averse than men (McCulloch, 2017). Confidence also plays a role in risk preferences; while men and women both experience overconfidence, women display less confidence than men in situations of uncertainty (Croson & Gneezy, 2009). When asked on surveys, women are more

likely to respond that they do not know the answer to financial literacy questions, indicating that they are aware of their lack of financial literacy (Lusardi and Mitchell, 2014). This awareness of their lack of financial knowledge could increase the number of financial decisions that they view as uncertain, potentially making them less confident in their saving and investing behavior. Gaps in financial literacy and financial risk-taking mean women are less likely to be investing their income and using it to its full capacity to build wealth.

Lessons Learned

As described above, lower rates of retirement savings contributions, lack of financial literacy, and lack of confidence under risk and uncertainty among women compound to contribute to asset and wealth inequality. In order to begin understanding the best practices for addressing these savings and financial literacy gaps, we must look at the literature and best practices around increasing access and amounts contributed to employer provided retirement plans and personal savings, as well as financial literacy.

Employer Provided Retirement Plans

Like other safety net programs in the United States (e.g. health insurance), people's ability to save for retirement is, in part, tied to their employment. Whether an employer offers retirement savings plans and what kind of savings plan is provided both factor into a person's ability to save. First, there has been a long trend away from DB plans (e.g. pensions) to DC plans (e.g. 401Ks) in the private sector, and only about 60% of employees work for an employer that offers a retirement plan at all (Brown et al., 2016). Further, more workers (1 in 10 nationally) are now subcontracted, temporary, or part-time, including in the "gig economy" such as ride-sharing apps and food delivery services. In general, the fringe benefits that had previously been associated with work are no longer available to these workers (Reder et al., 2019). Women are more likely to work in a part-time position because of caregiving responsibilities, and Black women and women of color are more likely to perform low-wage work that is subcontracted (McCulloch 2017). This lack of benefits has real implications for women's ability to save. One way to address retirement savings being tied to employers is the implementation of portable benefits. Portable benefits are attached to workers and not employers, and give people with nontraditional forms of employment the ability to accrue benefits based on the hours worked, or another relevant unit of labor.

In 2015, Oregon became the first state to create a state-sponsored retirement savings plan, OregonSaves. This program mandates private-sector employers to offer retirement plans or sign their employees up for OregonSaves. While OregonSaves is still being rolled out to some employers, as of June 29, 2019, when researchers began studying the effects of OregonSaves, 4,970 employers who had not previously offered their employees retirement savings plans were enrolled in the state's program (Zhong, 2020). Of the 171,243 workers who were able to enroll in the program, 38.5% of them enrolled and successfully completed a background

check (Zhong, 2020)⁴. The eligible active workers who made contributions had an average monthly income of about \$2,000 and made average monthly contributions amounts of \$110 using the default 5% contribution rate (Zhong, 2020). Given that the average monthly income of Americans is just under \$5,000, we can see that low- and middle-income workers are the primary participants in OregonSaves (Zhong, 2020).

In addition to being less likely to do work that provides retirement benefits, women are also less likely to take full advantage of their employer-sponsored retirement benefits when they are offered them (McCulloch, 2017). Behavioral economics and social psychology literature highlights the importance of defaults in nudging people to make better decisions for themselves (Thaler & Sunstein, 2008). In most companies, employees must sign up to be enrolled in their employer provided savings plan, and if no action is taken on the part of the employee, the default is for them to not be enrolled in the plan (Beshears et al., 2009). Inertia has immense power in people's decision making, so defaults have the ability to influence people's savings decisions. Since the default is not being enrolled in the employer retirement plan, many people who could benefit from being enrolled do not. Evidence shows that making a default plan opt-out versus opt-in increases the take-up rate of the program by employees, especially those with low levels of financial knowledge (Beshears et al., 2009). While this study did not investigate the responsiveness to defaults by gender, as stated above, we know that women have lower levels of financial knowledge compared to men (Lusardi and Mitchell, 2014), and therefore automatic enrollment might be especially helpful for women who have less confidence in their financial literacy.

In 2006, President Bush signed the Pension Protection Act (PPA) into law to reform pension provisions. In order to promote better savings, the Act included a number of measures such as automatic enrollment, employer contributions, contribution escalation, and qualified default investment alternatives. While the PPA did not mandate the auto-enrollment of individuals into employer-provided pension plans, many firms adopted the outlined measures in return for avoiding annual non-discrimination testing. One study of firms that opted into the provisions of the PPA, finds that enrollment in employer provided retirement plans before automatic enrollment was below 50% for new hires and increased to 75% within two years of working at the firm. With automatic enrollment, over 90% of new hires enrolled in the employer retirement plan (Beshears et al., 2008). This study also found that the participation rate did not seem to be affected by the default rate of contribution, in this case either 3% or 6%.

However, the default contribution rate did impact people's contribution amounts. Without a default contribution rate, a majority of participants opted to save at or above the employer match threshold of 6%, but when the contribution rate was

⁴ At the time of this study, there were 29,332 pending cases and 12,630 employees who had not yet contributed to their plans and therefore we do not know whether they would be participants or not.

lower (3%) by default, a larger number of participants stuck with that rate (Beshears et al., 2008). Thus, for participants who would have opted into a larger contribution rate but didn't because of the lower default, this might have negative implications for their long-term savings. In order to mitigate some of the savings lags associated with automatic enrollments and low default contribution rates, employers can also provide contribution escalation, which gradually increases employees' contribution over time. Those who opted-in to contribution escalation starting at 3% had their contribution amounts increased to 13.5% over four years (Beshears et al., 2008). Those who did not opt-in to contribution escalation started with contribution rates of 5.3% but only increased to 7.5% over the same four-year period (Beshears et al., 2008). Overall, those who did not opt-in to contribution escalations started saving more than the group that opted-in to the escalation, but the group that did participate ended up saving more in the long run (Beshears et al., 2008).

In 2019, the Setting Every Community Up for Retirement Enhancement (SECURE) Act updated the PPA. Although this change in legislation is too new to have received rigorous evaluations, there are some features of the Act that are important to note, as they might affect both employers and employee's decision-making with regards to retirement savings. First, the SECURE Act increases the cap on auto-escalations from 10% to 15% of an employee's compensation (Cass, 2019). Further, this Act creates more incentives for smaller employers (100 or fewer employees) to enroll their workers in retirement plans through increasing the tax credit for creating a retirement plan for their workers as well as creating a new tax credit for employers who create auto-enrollment retirement plans (Cass, 2019). Lastly, the SECURE Act cuts the amount of hours that a long-term (three consecutive years) part-time employee must work annually to be eligible for a retirement plan in half (Cass, 2019). All of these expansions to the PPA may increase retirement savings both among populations that were saving already as well as those that might not have had access to an employer provided plan previously.

Taken together, people's ability to save for retirement is often tied to their employers. If employers do not provide savings plans, government intervention to provide savings options can be effective in helping people save, particularly low- and moderate-income people. Further, we can see that defaults are powerful in people's decision making, and therefore decision-makers should be thoughtful about the way they structure defaults in programs in order to maximize benefits for everyone. Opt-out programs see higher participation, and people tend to stick with default savings and contribution escalation rates when they are provided. Still, these methods have limitations in the way that they could reach women because they depend on labor force participation and many women are left out of the formal economy due to caretaking responsibilities (McCulloch, 2017).

Personal Savings

Aside from employer or government-sponsored retirement savings, a person's savings are an important asset to build. However, as noted previously, it is particularly difficult for low-income people to save. One program some governments and non-profits have turned to in order to encourage low-income people to save is individual development accounts (IDAs). IDAs are subsidized savings accounts targeted at low-income people who also typically require them to attend some form of financial education program. The first systematic study of IDAs in the United States was conducted through the American Dream Demonstration (ADD), and included 13 host organizations that designed, implemented, and ran the IDA programs (Schreiner et al., 2002). Because each host organization had different designs, the amount of money matched for each dollar saved, the amount of time each deposit would be matched for, the limit on matchable deposits, and the monthly savings targets of participants all varied. All ADD programs allowed matched savings to be used only for homeownership expenses, starting or supporting a microenterprise, post-secondary education or job training, or retirement. Lastly, financial education was offered in both a general form and an asset-specific form, with the asset-specific education targeted at managing the asset the matched savings would be used for. At the end of the study period, the average monthly deposits from participants were about \$19, and with an average match rate of about 2:1, the average accumulated savings were about \$700 per participant (Schreiner et al. 2002). Further, given that 80% of the participants in the study were women, and a majority were minorities, this increase in savings for low-income people shows promise for women's asset-building potential.

Because IDAs offer other programs along with the match rate (i.e. financial literacy trainings), it is difficult to isolate the effect of a match rate on a person's saving behaviors. In order to isolate the impact of match rates on low- and middle-income families' saving behaviors, researchers completed a randomized control trial (RCT) of 14,000 tax filers at a St. Louis H&R Block (Duflo et al., 2006). Participants were randomly assigned to receive an offer to open an IRA account with no match rate in the control group, and 20% or 50% match rates in the experimental groups. Participation rates were highest (14%) in the 50% match rate group and decreased as the match rate decreased. Similarly, the higher the match rate the higher the aggregate contribution level, with those in the 50% match rate group contributing \$155 on average, and contributions decreasing as the match rate did (Duflo et al., 2006). However, conditional on the match rate, the average level of contributions was not different for those in the different treatment groups. This experiment also found that the tax professionals offering the IRAs and match rates had an effect on the take-up rate. Although it is unclear what the causal mechanism of tax professionals' influence on take-up rates was, it likely had something to do with their attitude, skill level, or other traits related to how they presented the savings opportunity (Duflo et al., 2006). This points to the fact that the way in which information is presented is also important to consider when offering people incentives to save.

In addition to subsidizing savings accounts, another policy proposal to combat wealth inequality that has gotten attention recently are “universal baby bonds”. A baby bond would function as a government provided savings account given to every newborn child with funds contributed by the government based on a family’s income. Baby bonds gained more mainstream policy attention in 2019 when presidential candidate Corey Booker added the proposal to the center of his political campaign to address racial wealth inequality (Nova & Schoen, 2019). While the details of baby bond programs vary, Booker’s plan proposed a \$1,000 savings account for every American newborn with up to an additional \$2,000 depending on the family’s income (Nova & Schoen, 2019). Further, these savings accounts would be managed by the Treasury Department with a projected 3% annual rate of return (Nova & Schoen, 2019).

Although baby bonds have not been implemented anywhere, the potential effectiveness of the program has been studied by some scholars, with particular focus on the racial wealth gap. One study simulated the effect of providing baby bonds to children born between 1989 and 1996 on what their wealth outcomes would have been as young adults in 2015 if they had received a baby bond. In this study, bond amounts ranged between \$2,000 and \$50,000, with the amount allocated to a child’s account being inversely related to their family’s net worth. Under the assumption of a 2% annual rate of growth in this analysis, the study finds that with a baby bond program the median wealth of all Americans would increase by approximately 37% from \$29,000 to \$77,000 (Zewde, 2018). Further, this program would also substantially shrink the racial wealth gap; in 2015, White Americans held about 16 times as much wealth as Black Americans did, but if baby bonds had been instituted that gap would have decreased to White Americans only holding 1.4 times as much wealth (Zewde, 2018). This program has the potential to drastically reduce wealth inequality for less than 10% of the current annual Social Security costs (Zewde, 2018).

As standard economic theory would predict, incentives work, and specifically offering to increase the amount of money someone can save through a match rate will make people more likely to participate in saving and to save larger amounts than they would have without the incentive. Further, large redistribution policies such as baby bonds have the potential to drastically decrease inequalities at low costs, relative to the status quo.

Financial Literacy Education

Some believe that it is possible to increase people’s financial literacy through educational training (Lusardi and Mitchell, 2014). It is difficult, however, to isolate the channels through which financial literacy might affect asset accumulation. Two ways in which researchers have hypothesized that financial literacy could interact with the process of asset accumulation are (1) that a higher level of financial knowledge is associated with greater investment in the stock market, and (2) financial literacy is positively associated with retirement planning behavior. The

former is likely due to the fact that it is easier for people to gather and process information necessary for investing, and the latter is again likely due to the increased ease of understanding the financial aspects and importance of planning for the future (Jooij et al., 2012). Additionally, financial literacy can help people to understand the power of compounding interest – saving in the present will accumulate more assets than saving the same amount in the future because the longer money is accruing interest the larger the income from interest will be as it compounds over time. Most of the literature on financial literacy is correlational, so we cannot make claims about the ways financial literacy may or may not *cause* changes in asset-building behavior. On balance, most evaluations of financial literacy education, in schools in particular, indicate no increase in financial knowledge or better financial decision-making (Mandell, 2008; Mandell & Schmid Klein, 2009).

Limitations

Overall, the evidence supporting different methods of increasing assets lacks a gendered lens, and even more so an intersectional one. Further, there are limitations in the literature both in the lack of rigorous evaluation of best practices as well as challenges to identifying the causal mechanisms through which factors, such as financial literacy, affect financial outcomes. Additionally, no study has been done in New York City specifically on the effectiveness of any of these solutions, so we should be cautious in generalizing studies conducted in other geographical locations that have different political and economic landscapes to the case of New York. More research needs to be done on best practices in asset building, with particular attention to an intersectional gender lens.

Evaluative Criteria

The following criteria will be used to evaluate the policy options that aim to increase saving among women in New York City:

Cost-Effectiveness Analysis

The City government has limited resources, and therefore should pursue a policy option that achieves the greatest results for the least amount of money (i.e. is cost-effective). This quantitative criterion will evaluate the costs of a given policy option against how effective it is at achieving the goal of the intervention – increasing women's savings. Although there are a number of benefits associated with women's increased savings, and therefore assets and wealth, *this analysis defines effectiveness as the monetary increase in women's savings due to the policy intervention.*⁵

There are a number of costs associated with the given policy options. Although the specific costs of each alternative differ, the general costs to be considered for this analysis will include the costs borne by the City government, private firms necessary for implementation, as well as City residents; these costs include:

1. The direct costs to the City government of the policy option.
2. Administrative costs to both the City government and private firms, including the cost of personnel and facilities spaces necessary for implementing the policy as well as other direct costs to private firms as a result of the policy.
3. Costs incurred by City residents to utilize the services provided by the policy option.

The cost-effectiveness criterion will rank alternatives based on the cost-effectiveness ratio – a proportion of the present value (PV) of the total increase in costs (in 2019 dollars) to the present value of the total increase in savings for women (in 2019 dollars). A cost-effectiveness ratio less than one is preferable, as that implies that the option has a greater increase in savings relative to the costs. See Appendix A for the full cost-effectiveness calculations of each option with relevant assumptions and Appendix B for a sensitivity analysis of key assumptions.

$$\text{Cost Effectiveness Ratio} = \frac{\textit{PV Total increase in Costs}}{\textit{PV Total Increase in Savings}}$$

⁵ A cost-effectiveness analysis was chosen for simplicity, but it is important to note that it does not account for the full benefits of any of these programs, as a full cost-benefit analysis would produce. Using the effectiveness measure of increases in savings, while increasing the ease of analysis and focusing on a key metric of success, underestimates the total benefits of the program. This analysis does not account for non-monetary benefits, for example, an increase in women's psychological wellbeing due to their increase in financial security. It also does not account for the full monetary benefits of these programs, such as the value of the assets that women might go on to invest their savings in (especially for the IDA program), as well as the benefit of having one's own savings which could decrease the amount of money the government would need to spend in public assistance later in these women's lives.

Equity

The mission of CGE is to create equity for girls, women, transgender, and gender non-binary New Yorkers. Further, one of the key principles of CGE outlined in their strategic plan is to use an intersectional lens to address inequities faced by women. The recommended policy option will work to create equity between men and women⁶ in their ability to accumulate assets and wealth, but an intersectional gender lens must also be considered.

Equity requires that people receive the amount of resources and support that is proportional to their needs; in this case, that means that those with the least amount of savings, who experience the greatest barriers to accumulating assets through savings, should increase their savings the most through the given policy option. As described earlier, those from historically marginalized identities (i.e. racial/ethnic minorities, immigrants, LGBTQ people, low socioeconomic status people, etc.) experience greater barriers to savings. Therefore, the equity criterion will assess the extent to which a policy helps those New Yorkers, for whom saving is most difficult, build assets.

The equity criterion will assess each policy option qualitatively based on how they are able to provide targeted benefits to those at the lowest end of the income distribution who have the least amount of savings. Policy options will rank high on equity if they increase savings among those who need it the most. Conversely, policy options will rank low on equity if they fail to increase savings among the most vulnerable populations of women. Lastly, policy options will rank medium on equity if the increase in savings for women at the lowest end of the income distribution are modest.

Political and Administrative Feasibility

Because CGE is part of the City government, and any policy option will need to secure the Mayor's approval, be passed by the City Council, and be implemented by other government agencies and/or private firms, both political and administrative feasibility must be considered.

This qualitative criterion will assess the extent to which:

1. The City government will be likely to pass a given policy option. This will take into consideration the members of City Council's political positions relevant to the alternatives as well as the City Council's propensity to pass a given policy based on previous legislation they have passed.
2. The alternative will require buy-in from other government agencies and private firms, and how many other parties must be involved.

⁶ Due to limitations in data and evidence of the different effects of policies on transgender and gender non-binary people, this analysis only looks at the difference between men and women. When more data becomes available in the future, further analysis should be done to include the effects and benefits that will accrue to these populations specifically.

3. The funding for the policy that will come from the FY 2021 budget, and how much funding it will require.

Policy options will rank high on political and administrative feasibility if they are likely to be passed by the City Council, require minimal amounts of buy-in from other government agencies and private firms, and require minimal amounts of funding from the FY 2021 budget. Conversely, policy options that are unlikely to be passed by the City Council, require a large amount of buy-in from other government agencies and private firms, and require large amounts of money from the City's budget will rank low on the political and administrative feasibility criterion. Lastly, a policy option with some combination of both high and low attributes in each subcategory will rank medium on the political and administrative feasibility criterion.

Policy Options

In order to close the gender asset and wealth gap, the following policy options will be considered to increase women's saving behaviors. In addition to any of these policy options, CGE, and the City government as a whole, should invest in data collection of the assets and debts of New Yorkers to better capture the state of wealth and asset gaps in the City. This data collection should pay particular attention to sampling vulnerable populations in the City and collecting demographic information such as race, gender identity, sexual orientation, and immigration status in order to produce an effective intersectional analysis. This will allow CGE to better understand and make policies that improve the lives of girls, women, transgender and gender non-binary individuals.

Option 1. Status Quo

CGE can continue its efforts to fulfill the other aspects of the Economic Mobility and Opportunity initiatives in its strategic plan. Namely, closing the gender pay gap for all workers and closing gender leadership gaps in public, private, and non-profit sectors instead of investing scarce resources to directly address the asset and wealth gap in the short run (New York City, 2018). Further, continued efforts to close the pay gap and move more women into leadership could also have positive benefits in closing the asset gap. As women have more income, they might naturally be able to save more without need for further intervention from the City government. One of CGE's main efforts in this area would be studying the effects of New York City's salary history ban policy, which was enacted in 2017.

Additionally, Mayor de Blasio introduced legislation in 2019 to create a universal retirement savings program for all private sector employees in New York City (City, 2019). The Mayor's proposal included making the plans opt-out, with contributions based on a default rate, and would be portable with the employee and not tied to the employer (City, 2019). Although this bill is currently laid over in committee, its introduction shows that increasing retirement savings, especially for those who do not currently have access for savings plans, is on the policy agenda in New York City.

However, due to the financial limitations the City is facing due to COVID-19 the city government as a whole is facing budgetary restrictions, and many of the efforts CGE had planned in regard to closing the gender pay and leadership gap have stalled for the time being.

Lastly, newly introduced legislation at the Federal level, namely the SECURE Act, has the ability to increase savings. The features that would do this include increasing the cap on auto-escalations from 10% to 15%, incentivizing smaller employers (100 or fewer employees) to enroll their workers in retirement plans and making those plans auto-enrolled, and expanding eligibility for part time employees to participate in employer-sponsored retirement plans (Cass, 2019). However, one analysis of the SECURE Act stated that the Act would only enhance retirement security modestly but would ultimately do little for the overall population (Steuerle, 2019).

Cost Effectiveness Analysis: *N/A*

Overall, the SECURE Act will not substantially increase savings among women over the time period of this analysis and it is unclear how CGE's efforts will affect women's savings.⁷ Further, if present trends continue, costs will also not substantially increase within the City of New York above what they would have been anyway. Altogether, a cost-effectiveness ratio *cannot be determined* for the status quo.

Equity: *Low*

Wealth and asset inequity would likely persist if present trends continue. First, policies such as salary history bans benefit women at the higher end of the income distribution more than low-income workers. Similarly, although the SECURE Act has features targeted at increasing savings among those who currently experience barriers to savings (i.e. part time workers and employees who don't work for employers that offer retirement savings), it is limited in its ability to reach the most vulnerable populations of women. Overall, the benefits of the SECURE Act will go to those already better off (Steuerle, 2019). Further, it is unclear whether part-time workers will actually be able to benefit from being able to have access to employer-sponsored retirement plans earlier if they are not able to forgo current consumption to save for the future.

If any progress will be made in increasing women's wealth and assets through the status quo, the benefits will continue to be accrued by women that would have had higher savings anyway. The status quo policies are also only able to reach women who are part of the formal labor force and leave out women who are not currently in the formal economy due to caregiving responsibilities or other reasons. This subset of women, along with women who are low-income and part of other historically marginalized groups, will likely receive little to no benefits through the status quo. Because of this, the status quo ranks *low* on equity.

Political and Administrative Feasibility: *High*

Continuing the status quo would require CGE to continue its monitoring and evaluation efforts as planned. Absent any additional efforts on the part of the CGE, it is likely that no additional policy changes will be made at the City level, and therefore would not require any new legislation to be passed by the City Council and Mayor. Lastly this would not require any additional collaboration between other government and non-governmental agencies and would not require any additional funding from the FY 2021 budget. Altogether, letting present trends continue has a very *high* political and administrative feasibility.

⁷ Efforts to close the gender pay and leadership gap through policies such as the salary history ban could work to increase women's incomes and allow them to save more. However, evidence of the impact of these policies on women's incomes and their subsequent saving behavior due to their change in income is scarce. Because of the uncertainty, projecting these changes is outside the scope of this analysis. More research should be done on the impact of these policies.

	Cost-Effectiveness Analysis	Equity	Political and Administrative Feasibility
Status Quo	N/A	Low	High

Option 2. Mandated Automatic Enrollment

One way to combat the fact that women save less than men would be to nudge women to take full advantage of their employer-sponsored retirement benefits. Instead of employers making their retirement benefits opt-in, employers could structure their benefits as opt-out, so the default is automatic enrollment. CGE can propose legislation to mandate the automatic enrollment of employees in employer-sponsored retirement plans. In addition to mandating automatic enrollment, the legislation should also provide a default contribution rate and automatic escalation. The default contribution rate should start at a minimum of 3%, with the default cap on contribution escalations up to 8%, or the employer contribution matching maximum amount, whichever is smaller. This legislation will allow employees to opt-out of the savings plans as well as any of the defaults. Further, they will have the ability to choose their own contribution rate and escalation cap if they choose to do so.

Cost Effectiveness Analysis: .56—(High)

Mandated Automatic enrollment in employer-sponsored retirement plans is the most cost-effective policy option. It is also the only policy option with a cost-effectiveness ratio less than 1, meaning women accrue more savings through this policy option than the cost of administering the policy. The main cost of this alternative is the increase employer matched contributions to employee retirement savings.⁸

Over a 20-year time period, the present value of the total cost is: \$22.8 billion

The present value of the increase in savings is: \$41 billion

Overall, the cost effectiveness ratio for the 20-year time span of this policy is:

$$\frac{22,822,633,562.86}{41,062,778,430.13} = .56 \text{ dollars spent per } \$1 \text{ increase in women's saving}$$

Equity: Low

Mandated automatic enrollment in employer-sponsored retirement is limited in its ability to reach the most vulnerable. Although this option is extremely cost effective in terms of its ability to increase women's savings, it will likely not reach the women at the lowest end of the income distribution. First, this policy can only reach women who work for an employer who offers retirement savings and are eligible for those plans. This will disproportionately leave out part-time workers who are typically not eligible for their employer provided plans, and who are disproportionately lower-income women of color.

Additionally, because savings is most costly for those at the lower end of the income distribution, low-income women eligible for this option might have to opt-out because they can't afford to save. It is also possible that low-income women who are

⁸ See Appendix A, page 36 for full assumptions and calculations

eligible and stick with the default because that is the easiest option might be negatively impacted because of their loss of income for present consumption. Even though the default rate is set low in order to mitigate this possibility, it is still possible that losing 3% of one's income to savings may be too high for the lowest income women. Although this default could be helpful for lower-income women who had access to employer-sponsored plans and were failing to save due to a lack of financial knowledge of the benefits of savings, it's not clear how many women this would actually apply to. Overall, this option ranks *low* on equity because it fails to substantially increase savings among the lowest income women.

Political and Administrative Feasibility: *High*

This option is likely to be highly administratively and politically feasible. First, nudges are popular policies among governments, as they allow people to maintain their freedom to make choices for themselves yet make people better off (Benartzi et al., 2017). Further, Mayor de Blasio has proposed legislation to create a universal retirement savings program for all private sector employees in New York City whose employers do not offer a retirement savings plan (City, 2019). The Mayor's proposal is also opt-out and has a default contribution rate (City, 2019). The Mayor has shown support for increasing retirement savings among the City population as well as the automatic enrollment and default features of this option. Additionally, 21 of the 51 members of the City Council sponsored the Mayor's bill, but it has been laid over in committee since late September (The New York City Council, 2019). Legislation for retirement savings in the City Council seems to have a moderate amount of support.

This policy would also not require any additional money from the FY 2021 budget, and the major costs of this legislation come from the increase in employer matched contributions to retirement savings accounts. Besides the implementation by firms, this policy would also not require further collaboration or buy-in from other governmental agencies. Because this policy would not require additional funding or inputs from the City government, it might be more likely to pass than the Mayor's proposed retirement bill. Overall, the political and administrative feasibility for mandated automatic enrollment in employer-sponsored retirement plans is *high*.

	Cost-Effectiveness Analysis	Equity	Political and Administrative Feasibility
Mandated Automatic Enrollment	High .56 dollars spent per \$1 increase in women's savings	Low	High

Option 3. Individual Development Accounts

One way to help combat the asset gap is to incentivize and support savings among those that are least financially stable. Saving can be incentivized through matching peoples' savings so that they can earn more by saving than by not. An individual development account (IDA) does this by offering matched savings at varying rates. IDAs are mainly intended for savings for discrete assets, with deposits typically matched for only two or three years after first enrollment (Schreiner et al., 2002). This savings approach gives more money back to participants in a shorter period of time than a traditional savings account. Further, IDA programs also require attending financial education for those participating in the program so they can best manage their new assets.

CGE can propose legislation to the City government to start an IDA program modeled after the program used by the American Dream Demonstration (ADD) (Schreiner et al., 2002). This program would provide matched savings at a 2:1 rate (\$2 matched for every \$1 provided) for individuals with incomes at or below 200% of the New York City supplemental poverty line. The City government would provide funds to this program, which would be administered through non-profit and non-governmental organizations that already exist in different communities throughout the City. The program would also have caps on both the amount of time a person can accumulate matchable deposits as well as on the maximum deposit that can be matched. This program would have a two-year, \$1,000 cap on matches, meaning that participants can receive matches on their deposits for up to two years after they open an account, or until they have contributed \$1,000, whichever comes first. After this two year or \$1,000 period, participants will be able to continue making savings deposits if they choose, but they will not receive matches on their contributions. Further, there will be no restrictions on when and for what purpose the savings can be withdrawn for.

Cost Effectiveness Analysis: 2.79—(Low)

Of all the options, IDAs are the least cost-effective. Because the costs and savings of this program are recurring and the number of participants and average savings contributed by IDA participants is assumed to stay constant, this analysis shows the cost effectiveness ratio for one cohort of program participants, which also represents the long-run cost-effectiveness of the program if the costs and savings are annualized at a constant rate.

The major costs of this program come from the matched contributions, the cost of the labor, including program supervisors and bankers responsible for opening the savings accounts, the costs of facilities used for financial literacy trainings, and the costs of participation (attending the required amount of financial literacy trainings).⁹

⁹ See Appendix A, page 39 for full assumptions and calculations

For one cohort of participants, over two years, the present value of the total cost is: \$4.4 million

The total increase in savings for women is: \$1.5 million

Overall, the cost effectiveness ratio for one cohort of this policy is:

$$\frac{4,411,400.88}{1,583,488.20} = 2.78 \text{ dollars spent per } \$1 \text{ increase in women's savings}$$

Equity: High

By design, IDAs target those at the lowest end of the income distribution, who face the most significant barriers to savings. By offering matched savings, this policy is able to incentivize savings for those with the least amount of income and helps them save more than they could have through traditional means of saving. Although this policy does impose costs on those that take advantage of the program by requiring them to attend financial literacy training, the increase in savings greatly outweighs this cost to the beneficiaries of this policy. Lastly, based on the demographics of participants in the ADD, IDA programs have overwhelmingly been utilized by women and other subgroups that typically experience greater barriers to savings. In the ADD, 80% of the participants were women, over half were racial/ethnic minorities (2% Asian, 47% Black, and 9% Latinx/Hispanic), a majority was single (48% never married, 27% divorced or separated, 2% widowed), and 44% were single parents. Overall, because IDAs target those at the lowest end of the income distribution and serve historically marginalized populations, IDAs rank *high* on equity.

Political and Administrative Feasibility: Medium

By their nature, IDAs require large amounts of public-private collaboration and would require large amounts of funding from the FY 2021 budget. This option would require funding from the City, outreach and program implementation from non-profit organizations that will act as service providers, and collaboration with financial institutions to open the savings accounts which people will use to make their deposits.

Although IDAs are intensive in the inputs they require, they do align with stated goals of the Mayor and many members of City Council. In particular, the fact that IDAs target low-income populations and are utilized heavily by women and people of color is promising for its ability to raise support among City Council and the Mayor. First, one of the reasons the Mayor proposed the creation of City-operated retirement accounts was because of the lack of savings among low-income people, and among them, primarily women and people of color (City, 2019). Helping this vulnerable population accrue assets is on the Mayor's agenda, and therefore this policy would likely be able to achieve his support. Additionally, many City Council members have stated their commitment to helping low-income people, creating gender equity, supporting small businesses, and improving social services. For example, about 30% of City Council members explicitly list equity, supporting low-

income people, small businesses, social services, and gender as issues important to them on their biography page on the City Council website. Lastly, the fact that many states and localities (e.g. New Jersey, California, etc.) have created IDA programs and had success with them gives New York City a model of how to create their own program as well as proof that it can be effectively implemented to reduce the risk of investing in the program (Smith et al., 2007). Taken together, IDAs have promise to gain political support but require a large amount of funding and cross-sector collaboration, meaning that this option has a *medium* amount of political and administrative feasibility.

	Cost-Effectiveness Analysis	Equity	Political and Administrative Feasibility
Individual Development Accounts	Low 2.79 dollars spent per \$1 increase in women's savings	High	Medium

Option 4. Universal Baby Bonds

One way to close the gender asset and wealth gap would be to provide savings accounts for all newborns. These accounts would provide people with assets inversely proportional to the amount of income that their family has in order to break the cycle of wealth inequality that has been perpetuated by historical inequalities. CGE can propose legislation to create baby bonds for all New Yorkers, modeled after Corey Bookers' Baby Bond plan put forth in the American Opportunity Accounts Act bill (S.3766, 2018). Every child would receive a savings account with an initial deposits and additional annual payments of up to \$2,000 depending on the families' household income. These bonds would be managed by the New York City Department of Finance and be assumed to grow at a 3% interest rate. Residents would be able to access these accounts at the age of 18 and, upon gaining access, would be able to use the funds as they see fit.

Payment Transfers for Baby Bonds by Family Income		
Families income as a percent of the New York City Supplemental Poverty Line	Initial Amount (\$)	Annual Payments (\$)
Up to 100%	2,000	2,000
100% up to 125%	2,000	1,500
125% up to 175%	1,500	1,000
175% up to 225%	1,000	500
225% up to 325%	500	250
325% up to 500%	250	0
500% or more	0	0

Source: Adapted from the American Opportunity Accounts Act (2018)

Cost Effectiveness Analysis: 1.95 – (Medium)

Compared to the other options, universal baby bonds are moderately cost-effective. Like IDAs, this option is evaluated for one cohort of program participants (i.e. one year of babies born in New York City). The main cost of this program is the initial funds added to each baby bond as well as the annual payments added to the accounts.¹⁰

For one cohort of participants, the present value of the total cost is: \$1.3 billion

The total increase in savings for women is: \$695 million

Overall, the cost effectiveness ratio for one cohort of this policy is:

$$\frac{1,359,968,591.95}{695,860,499.77} = 1.95 \text{ dollars spent per } \$1 \text{ increase in women's savings}$$

¹⁰ See Appendix A, page 41 for full assumptions and calculations

Equity: *High*

Much like IDAs, Baby Bonds are equitable by design. They target those at the lowest end of the income distribution by giving money to people proportional to their needs in an effort to break the cycle of generational wealth and asset inequality. Further, simulations of this policy have been shown to substantially close the racial wealth gap between Black and White Americans (Zewde, 2018), and would likely do the same in New York City as well as among other racial and ethnic minority groups. Also, people will receive their Baby Bonds whether they are part of the formal labor market or not, and therefore this option will reach the largest amount of people because of its universal nature. In total, this policy ranks *high* on equity.

Political and Administrative Feasibility: *Low*

The wide-reaching nature of this policy will require large amounts of money from the FY 2021 budget, and will require the continuous investment of billions of dollars each year. Further, this option will require the New York City Department of Finance to manage these accounts, in collaboration with other financial institutions, and administer the funds once New Yorkers become eligible to receive their savings.

Although the equitable nature of this policy aligns with the goals of the Mayor and members of City Council, the fact that it would require such a large investment from the City as well as the fact that it has never been attempted anywhere and the City would be taking on large amounts of risk to pilot this program make it less likely for Council members to pass this legislation. Additionally, not every baby born in New York City continues to live there after they turn 18, and it is likely not in the interest of the City Council and Mayor to invest large amounts of City funds into accounts for people who will not continue to reside in the City. Overall, because this policy would require an enormous amount of investment and administration by the Department of Finance and other financial institutions, and is unlikely to gain support of City Council and the Mayor, it ranks low on administrative and political feasibility.

	Cost-Effectiveness Analysis	Equity	Political and Administrative Feasibility
Universal Baby Bonds	Medium 1.95 dollars spent per \$1 increase in women's savings	High	Low

Recommendation

	Cost-Effectiveness Analysis	Equity	Political and Administrative Feasibility
Status Quo	N/A	Low	High
Mandated Automatic Enrollment	High .56 dollars spent per \$1 increase in women's savings	Low	High
Individual Development Accounts	Low 2.79 dollars spent per \$1 increase in women's savings	High	Medium
Universal Baby Bonds	Medium 1.95 dollars spent per \$1 increase in women's savings	High	Low

Primary Recommendation

Based on the assessment of the policy options by the criteria of interest, I recommend *policy option 2: mandated automatic enrollment in employer-sponsored retirement plans*. Because women are less likely than men to take full advantage of their employer provided retirement plans (Brown et al., 2016), automatic enrollment should be especially effective at stimulating savings among women, effectively targeting the gender asset and wealth gap. This policy option is the most cost-effective and has the highest likelihood of gaining political support as well as being administratively feasible. Further, given the City's current financial situation with the resources that have been reallocated to respond to the COVID-19 outbreak as well as the major loss in revenue because of social distancing measures (New York City Comptroller, 2020), and the fact that this option does not require additional funds from the City's budget makes it the most likely be implemented.

However, the low equity score on this policy option is concerning for CGE's ability to reach the most vulnerable women in the City as well as its ability to fulfill its goal of using an intersectional gender lens to address inequities. First, the City should work

to study the effects that automatic enrollment has on increasing savings, with particular attention to those in the workforce at the lower end of the income distribution. Additionally, *I also recommend that CGE work to create a pilot individual development account program* when funding becomes more available. This will provide targeted support for low-income women, who might be left out of the automatic enrollment policy and will give them opportunities to increase their savings and invest in additional assets. If this pilot is successful, CGE should work to secure funding to expand the program.

Supplemental Recommendation

In addition to this recommendation, CGE, and the City government as a whole, must invest in data collection of the assets and debts of New Yorkers to better capture the state of wealth and asset inequalities in the City. Currently, the Mayor's Office for Economic Opportunity uses data from the American Community Survey (ACS), augmented by the poverty research unit to include imputed values for benefit participation and other household expenditures to study poverty in New York City (City Government, 2016). CGE should work with the poverty research unit to survey New Yorkers on their financial security. Having better information on the specific assets and debts New Yorkers have will allow a more focused, and evidence-based policy response from the City in the future. For example, if this data shows that low-income New Yorkers overwhelmingly work for employers who do not offer retirement savings, then more efforts should be invested in policy options that reach people outside of the labor force.

This data collection should be taken with particular attention to sampling vulnerable populations in the City and collecting demographic information such as race, gender identity, sexual orientation, and immigration status so that an effective intersectional analysis can be completed to understand and make better policies that improve the lives of girls, women, transgender and gender non-binary individuals.

Mitigating Risks in Implementation

All aspects of this recommendation will require buy-in from the Mayor and City Council. CGE should focus on presenting evidence to the Mayor and Council members on the positive effects that these policies will have for the City as a whole but also on women's financial security specifically. In addition to these efforts, the following risks should be considered and minimized in moving the implementation of these recommendations forward.

Automatic Enrollment in Employer-Sponsored Retirement Plans

One major risk present with this alternative is that employers will respond negatively to this policy. In the worst-case scenario, employers might change their retirement savings policies in an effort to avoid the increased costs of matched savings. One study of a nation-wide enactment of automatic enrollment policy in the United Kingdom found no evidence of employers reducing the contributions for new

employees after the policy was implemented (Cribb and Emmerson, 2016). Although this finding helps decrease concerns over backlash from employers, it is still a scenario that should be given careful consideration. Provisions could be added to the legislation that would prohibit employers from changing whether they match savings, although this might also have negative implications. If employers feel constrained in their decision-making and do not want to incur the increase in costs due to this policy, they might leave the City. Instead, key business leaders in the City should be consulted in creating this legislation.

Piloting an Individual Development Account Program

Individual development accounts require the buy-in of many stakeholders. Besides gaining support and funding from the government, non-profits acting as service providers and banks are also integral to implementation. The pilot of the IDA program should be started in the Bronx, because it has the largest share of people in or near the NYC supplemental poverty threshold. CGE should work to identify key non-profit organizations that currently offer services to low-income Bronx residents, and create an application for non-profits to apply for funding to run the pilot program. The number of service providers for the pilot should be chosen based on non-profit interest as well as the available funds. Financial institutions are also a key stakeholder that should be engaged, and a local bank branch should be chosen to handle the savings accounts of those participating in the program. Overall, local buy-in is critical as IDA programs are successful at engaging vulnerable communities because they work through pre-existing infrastructure built by non-profit service providers.

Additional Data Collection

Asking about sensitive information (immigration status, sexual orientation and gender identity, etc.) poses risks to the survey participation rates. While these risks exist, having information on these vulnerable subpopulations is integral to formulating policies that are ultimately aimed at supporting these populations. In an effort to mitigate these risks, the government should work with advocacy organizations within New York City to create thoughtfully worded survey questions that stress the importance of collecting this information for the ultimate benefit of vulnerable communities. Further, these same advocacy organizations could help provide advertisements necessary to encourage key populations to complete the survey, much like the advertising efforts that were put forth to encourage participation in the 2020 Census.

Conclusion

The gender wealth and asset gaps pose substantial challenges to women's ability to live financially secure lives in New York City. Increasing savings among women is an important part of closing the gap between men and women's assets and wealth. More research must be done on asset and wealth disparities in general, and New York City, specifically, must invest in further understanding this critical problem to better work towards reducing inequalities throughout the City.

Appendix A. Cost-Effectiveness Analysis Assumptions

Note: there are many assumptions in this analysis. Where possible, I cite relevant literature and estimates; in other cases I use my own approximations. Critical assumptions are explored in the Sensitivity analysis (see Appendix B.)

General Assumptions

- Discount rate: 3.5%
- All costs and savings occur at year end (standard practice)
- All costs and savings are reported in 2019 dollars

Option 2. Mandated Automatic Enrollment

Costs

The major cost associated with this option is the increase in employer contributions to employee retirement plans for firms that were not already participating in automatic enrollment. First, I assume that firms that offer matched savings offer 100% matched contributions, so the average total costs is equal to:

$$\begin{aligned} &\text{Average total number of Employees Participating} \\ &\times \text{Average total amount of contribution} \end{aligned}$$

In order to find the number of people who will be affected by this policy, I use the following estimates:

- New York City population as of 2018: **8,340,000** (United States Census Bureau, n.d.)
- The percent of New Yorkers in the civilian workforce: **63.5%** (United States Census Bureau, n.d.)
- The percent of employers who are not currently offering automatic enrollment: **32%** (Alight, 2017)
- The percent of employers that offer matched contributions: **66%**
- The average take-up rate for matched contributions: **82.5%¹¹** (Beshears et al., 2008)

I assume that employees are evenly distributed among employers who offer matched savings and who are not currently offering automatic enrollment. I also assume that employers who do not offer automatic enrollment are evenly distributed among employers who offer matched savings, so the number of people who will be affected by the policy is:

$$8,340,000 \times .635 \times .32 \times .66 \times .825 = \mathbf{922,758 \text{ employees}}$$

¹¹ The take up rate among those already employed at a firm and new hires are different – the take up rate among those already employed is 75% and the take up rate among new hires is 90% (Beshears et al., 2008). I use the average of these two percents to estimate an average take up rate among all people.

Among the people who participate in automatic enrollment at firms that offer matched contributions, there are people who will stick with the default rate, and there are those who will choose their own. Additionally, among the people who stick with the default, there are those who will also stick with default of automatic escalation and there are those who will not. To find the dollars contributed, I use the following estimates:

- Take up rate of the default contribution rate: **47%** (Beshears et al., 2008)
- Take up rate for auto-escalation: **85%** (Beshears et al., 2008)
- Default contribution rate without auto-escalation: **3%**
- Default contribution rate with auto escalation year 1: **3%**
- Default contribution rate with auto escalation year 2: **4%**
- Default contribution rate with auto escalation year 3: **5%¹²**
- Contribution rate for those that opt-out of the default rate: **4.5%** (Beshears et al., 2008)
- Per Capita annual income NYC: **\$38,556.95** (United States Census Bureau, n.d.)

The average total contributions per person in the first year of the program will be equal to the average contributions of those who take the default rate, which includes those who take the auto-escalation default and those who do not, plus those who do not take the default rate.

Average total contributions per person, in the first year for those that take the default

$$\begin{aligned} & .47 \times ((.85 \times .03 \times 38,556.95) + ((1 - .85) \times .03 \times 38,556.95)) \\ & = \mathbf{543.65 \text{ dollars}}^{13} \end{aligned}$$

Average total contributions per person per year for those that do not take the default

$$(1 - .47) \times (.045 \times 38,556.95) = \mathbf{919.58 \text{ dollars}}$$

The overall average total contributions per person in year 1 is

$$543.65 + 919.58 = \mathbf{1,463.23 \text{ dollars}}$$

Therefore the total costs in year 1 is equal to

$$1,463.23 \times 922,758 = \mathbf{1,350,212,479.67 \text{ dollars}}$$

¹² Auto-escalations cap at 5%, for costs, because this is roughly the average employer maximum on contribution matches (Alight, 2017).

¹³ This is the cost in the first year when the default contribution rate of those who stick with auto-escalation and those that do not save the same amount. The contribution rate will increase by 1 percentage point each year for the first 3 years, for those that stick with auto-escalation (85% of people).

With the increase in contributions due to automatic escalation, the overall present value of the costs over the 20-year time period of this analysis is **22,822,633,562.86 dollars**

Savings for women

The savings for this option are equal to the increase in retirement savings contributions due to automatic enrollment, plus the matched contributions for those that receive it. The same assumptions from the costs section hold true for the savings as well. The only other additional assumptions are that women are evenly distributed among employers that do and do not match savings, and

- The percent of women in the civilian workforce: 58.5% (United States Census Bureau, n.d.)

Because I assume that employers are matching 100% of contributions, the total increase in savings for women that receive matched savings in year 1 is double the cost of matched savings times the percent of women in the labor force

$$.585(1,350,212,479.67 \times 2) = \mathbf{1,579,748,601.21 \text{ dollars}}$$

For women that work for employers that do not currently offer automatic enrollment and do not receive matched savings, the savings are equal to the total number of women who do not receive matched savings times their contributions.

Similarly to the calculations for the total number of people receiving matched savings for the costs, the total number of women who do not receive contributions is a product of the total number of people in the New York City Population, the percent of people in the civilian workforce, the percent of employers who do not currently offer automatic enrollment, the percent of employers who do not offer matched savings, the take-up rate for automatic enrollment, and the percent of women in the civilian labor force (see the cost section for the respective assumptions).

$$.585 \times (8,340,000 \times .635 \times .32 \times (1 - .66) \times .825) = \mathbf{278,086 \text{ employees}}$$

The average total contributions per person in the first year of the program for women who do not have matched contributions will be equal to the average contributions of those who take the default rate, which includes those who take the auto-escalation default and those who do not, plus those who do not take the default rate.

Average total contributions per person, for women that take the default

$$\begin{aligned} &.47 \times ((.85 \times .03 \times 38,556.95) + ((1 - .85) \times .03 \times 38,556.95)) \\ &= \mathbf{543.65 \text{ dollars}}^{14} \end{aligned}$$

¹⁴ This is the cost in the first year when the default contribution rate of those who stick with auto-escalation and those that do not save the same amount. The contribution rate will increase by 1

Average total contributions for women that do not take the default
 $(1 - .47) \times (.045 * 38,556.95) = \mathbf{919.58 \text{ dollars}}$

The overall average total contributions are

$$543.65 + 919.58 = \mathbf{1,463.23 \text{ dollars}}$$

Therefore the average total savings for women in year 1 is equal to

$$1,579,748,601.21 + (1,463.23 \times 278,086) = \mathbf{1,986,653,543 \text{ dollars}}$$

With the increase in contributions due to automatic escalation, the overall present value of savings for women over the 20-year time period of this analysis is
41,062,778,430.13 dollars

The overall cost-effectiveness ratio for this option is

$$\frac{22,822,633,562.86}{41,062,778,430.13} = .56 \text{ dollars spent per \$1 increase in women's savings}$$

Option 3. Individual Development Accounts

Costs

The major costs associated with this program include the costs of labor, facilities, providing matched contributions to participants' accounts, and the costs of participation. The total costs of this program are equal to

$$\mathbf{\textit{Matched Savings + Facilities + Labor + Participation}}$$

The average total contribution matches is equal to the total number of participants times double the average annual contributions. I assume that

- Number of IDA service providers: **8**
- Number of employees per agency: **3**
- Number of participants per agency per year: **45**
- Match rate: **2:1**
- Average amount contributed by participants: **\$345.32** (Schreiner et al. 2002)

percentage point each year for the first 6 years, for those that stick with auto-escalation and do not have matched contributions.

The average total annual contribution is equal to

$$(8 \times 3 \times 45) \times (2 \times 345.32) = 702,681.09 \text{ dollars}$$

The major facilities cost is incurred because of the financial literacy trainings that participants must attend. I assume that

- Average per hour cost of facilities space: **\$225** (Peerspace, n.d.)
- Annual number of hours required for financial literacy training per year: **5**

The total annual cost of facilities is

$$225 \times 5 = 1,125 \text{ dollars}$$

The major costs of labor include the employees working at the IDA service providing non-profits as well as the time spent by bankers opening the savings account for participants and completing other tasks necessary for providing services to IDA participants. I assume

- Number of IDA service providers: **8**
- Number of employees per agency: **3**
- Average Salary of non-profit program managers: **\$63,280** (Salary, 2020)
- Average number of hours at the bank for IDA related services: **1,110 hours**
- Hourly wage for bankers: **\$17.05** (PayScale, 2020)

The total annual cost of labor is

$$(8 \times 3 \times 63,280) + (1110 \times 17.05) = 1,537,357.50 \text{ dollars}$$

Lastly, the major costs to participants is the time spent at financial literacy trainings. I assume

- Number of IDA service providers: **8**
- Number of employees per agency: **3**
- Number of participants per agency per year: **45**
- Opportunity Cost of participants: **\$15** per hour
- Annual number of hours required for financial literacy training: **5**

$$(8 \times 3 \times 45) \times (15 \times 5) = 81,000 \text{ dollars}$$

Adding up all the above costs, the average annual total costs of participation is

$$720,681.09 + 1,125 + 1,537,357.50 + 81,000 = 2,322,163.59 \text{ dollars}$$

For one cohort of participants over two years, the present value of the average total costs is **4,411,400.88 dollars**

Savings for women

The average total savings for women is a product of the percent of participants that are women, the total number of participants, and the average contributions plus the

matched savings. Matched savings are only received at the end of the program, when the savings are withdrawn. I assume

- Number of IDA service providers: **8**
- Number of employees per agency: **3**
- Number of participants per agency per year: **45**
- Percent of participants that are women: **80%** (Schreiner et al. 2002)
- Average amount contributed by participants per year: **\$345.32** (Schreiner et al. 2002)
- The total average amount of matches savings is: **\$702,681.09**

In the first year of the program, women's savings is only equal to their contributions

$$.8((8 \times 3 \times 45) \times 345.32) = \mathbf{281,072.44 \text{ dollars}}$$

In the second, and final, year of the program, women see the same average savings in addition to the matched contributions from both the first and second year. The average total savings for women is equal to

$$(281,072.44) + .8(702,681.09 \times 2) = \mathbf{1,405,362.18 \text{ dollars}}$$

The total average present value of savings for women through individual development accounts is 1,583,488.20 dollars

For one cohort of program participants over two years, the overall cost effectiveness ratio for this option is

$$\frac{4,411,400.88}{1,583,488.20} = \mathbf{2.79 \text{ dollars spent per \$1 increase in women's savings}}$$

Option 4. Universal Baby Bonds

Costs

The major costs of this program are the contributions into the baby bonds for each newborn New Yorker. The contribution amounts differ by a family's income as a percentage of the New York City supplemental line. The initial amount deposited into the account is also different than the subsequent annual account contributions.

I use the following assumptions to estimate costs

- New York City population as of 2018: **8,340,000** (United States Census Bureau, n.d.)
- New York City birth rate – **1.36%** (NYC Health, 2017)
- Percent of families up to 100% of NYC supplemental poverty line: **19.22%**
- Percent of families 100-125 % of NYC supplemental poverty line: **12.91%**
- Percent of families 125-175% of NYC supplemental poverty line: **20.26%**
- Percent of families 175- 225% of NYC supplemental poverty line: **13.15%**
- Percent of families 225- 325% of NYC supplemental poverty line: **16.31%**
- Percent of families 325- 500% of NYC supplemental poverty line: **10.52%**
- Percent of families 500% or more of NYC supplemental poverty line: **7.64%**

- Initial amount for families up to 100% of NYC supplemental poverty line: **\$2,000**
- Initial amount for families 100-125% of NYC supplemental poverty line: **\$2,000**
- Initial amount for families 125- 175% of NYC supplemental poverty line: **\$1,500**
- Initial amount for families 175- 225% of NYC supplemental poverty line: **\$1,000**
- Initial amount for families 225-325% of NYC supplemental poverty line: **\$500**
- Initial amount for families 325-500% of NYC supplemental poverty line: **\$250**
- Initial amount for families 500% or more of the NYC supplemental poverty line: **\$0**
- Annual amount for families up to 100% of NYC supplemental poverty line: **\$2,000**
- Annual amount for families 100-125% of NYC supplemental poverty line: **\$1,500**
- Annual amount for families 125- 175% of NYC supplemental poverty line: **\$1,000**
- Annual amount for families 175- 225% of NYC supplemental poverty line: **\$500**
- Annual amount for families 225-325% of NYC supplemental poverty line: **\$250**
- Annual amount for families 325-500% of NYC supplemental poverty line: **\$0**
- Annual amount for families 500% or more of the NYC supplemental poverty line: **\$0**

The total costs in year 1, for one birth cohort in New York is the number of babies born (the total population times the birth rate) times the sum of the contributions for each section of the income distribution. The total costs in the first year of the program is

$$\begin{aligned}
 & (8,340,000 \times .0136) \\
 & \quad \times ((.1922 \times 2,000) + (.1291 \times 2,000) + (.2026 \times 1,500) \\
 & \quad + (.1315 \times 1,000) + (.1631 \times 500) + (.1052 \times 250)) \\
 & = \mathbf{134,503,850.40 \text{ dollars}}
 \end{aligned}$$

The annual costs of the program after the first year for one birth cohort is calculated the same as above, with the annual costs instead of the initial costs for each section of the income distribution. The total annual costs are

$$\begin{aligned}
 & (8,340,000 \times .0136) \\
 & \quad \times ((.1922 \times 2,000) + (.1291 \times 1,500) + (.2026 \times 1,000) \\
 & \quad + (.1315 \times 500) + (.1631 \times 250)) = \mathbf{100,626,937.20 \text{ dollars}}
 \end{aligned}$$

The present value of the total costs for one birth cohort over an 18-year period is **1,359,968,591.95 dollars**

Savings for women

The increase in savings for women is the total number of contributions for female born babies plus the interest the accounts earn over the 18-year time period. I assume

- Percent of babies that will be female in New York: **50%**
- Rate of return on the bonds: **3%** (Nova & Schoen, 2019)

With 50% of the new born population being born female and receiving the amount contributed the baby bond accounts plus the interest rate, the present value of the savings that will go to women in one birth cohort of this program is **695,860,499.77 dollars**

Overall, the cost-benefit ratio for one birth cohort, over 18 years of the program is
$$\frac{1,359,968,591.95}{695,860,499.77} = \mathbf{1.95 \text{ dollars spent per } \$1 \text{ increase in women's savings}}$$

Appendix B. Cost-Effectiveness Sensitivity Analysis

Below are the sensitivity analysis calculations for critical variables from the cost-effectiveness analysis. This sensitivity analysis looks at the elasticity of critical variables. Elasticity measures how sensitive the outcome is to changes in the critical variables. Mathematically, the elasticity represents a ratio of the percent change in the cost-effectiveness ratio and the percent change of the critical variable

$$\frac{\% \Delta \text{Cost - Effectiveness Ratio}}{\% \Delta \text{Critical Variable}} = \text{Elasticity}$$

The number produced from this calculation shows how a 1% change in the critical variable affects the cost-effectiveness ratio. Values less than one indicate that as the critical variable increases by 1% the cost-effectiveness ratio changes by less than 1%, meaning that the cost-effectiveness ratio is insensitive to the specification of that variable over the range of values chosen for the test.

Below, I test the sensitivity of

- The discount rate for all options
- The earnings amount for Automatic Enrollment
- Average amount saved for IDAs
- The match rate for IDAs
- The rate of returns for baby bonds
- The deposit amounts for baby bonds

Overall, this analysis shows that the cost-effectiveness ratios are not sensitive to the critical variable (i.e. have an elasticity of less than 1). One exception is the average amount saved for IDAs. This variable has an elasticity of greater than 1 for low values of the average amount saved. If people do not save at least \$27 a month (the assumption in the cost-effectiveness analysis (Schreiner et al. 2002)), the program will be much less cost-effective. While this analysis shows that the cost-effectiveness of IDAs is not sensitive to the match rate, the finding that the average amount contributed is sensitive to low amounts contributed suggests that a higher match rate will likely yield the most cost-effective results, as a greater match rate incentivizes more savings.

General Assumptions				
		Cost-effectiveness ratio		
	Discount rate	Automatic Enrollment	IDA	Baby Bonds
high	0.05	0.559210314	2.799452099	2.250214422
Medium	0.035	0.555798571	2.785875432	1.954369579
Low	0.025	0.553585782	2.776786764	1.782686508
Elasticity of discount rate	Automatic Enrollment	IDA	Baby Bonds	
high-medium	0.014323056	0.011371251	0.353210898	
medium-low	0.013934475	0.011418435	0.307460142	

Automatic Enrollment			
	Earnings	Cost-effectiveness ratio	
high	\$62,154.71	0.555798571	
medium	\$38,556.95	0.555798571	
high-medium	elasticity of earnings		
	3.26381E-16		

Individual Development Accounts		
	Average Amount Saved	Cost-effectiveness ratio
high	\$500.00	2.107093992
medium	\$325.32	2.785875432
low	\$170.59	4.5480642
	elasticity of savings amount	
high-medium	-0.453751379	
medium-low	-1.32994641	

Individual Development		
	Match rate	Cost-effectiveness ratio
low	1.00	3.536309351
medium	2.00	2.785875432
	elasticity of match rate	
high-medium	-0.538741905	

Baby Bonds			
	rate of return on bonds	Cost- effectiveness ratio	
high	0.04	1.770794877	
medium	0.03	1.954369579	
low	0.02	2.152863463	
	elasticity of rate of return on bond		
high-medium	-0.28179117		
medium-low	-0.30469244		

Baby Bonds			
	Elasticity of account deposit amounts	Cost- effectiveness ratio	
high	25%	1.954369579	
medium		1.954369579	
low	-25%	1.954369579	
	elasticity of account deposits		
high-medium	9.08916E-16		
medium-low	1.81783E-15		

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