



# Race, Wealth and Bankruptcy Code Exemptions in Washington, DC

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# Race, Wealth and Bankruptcy Code Exemptions in Washington, DC

## Executive Summary

Bankruptcy law in the United States is race-neutral on its face. People of all races and ethnicities who file for bankruptcy in a given jurisdiction are subject to the same rules that govern which assets they may retain following bankruptcy proceedings.

However, bankruptcy scholars have theorized that bankruptcy law has racially disparate effects.<sup>1</sup> Our original research provides an empirical look at how facially neutral bankruptcy laws contribute to disparate outcomes for presumed<sup>2</sup> Black or African American<sup>3</sup> and white debtors and may therefore play a role in perpetuating wealth inequality across these groups.

This report relies on an original dataset compiled from a random sample of bankruptcy filings from 2011 in the United States Bankruptcy Court of the District of Columbia. Data from 2011 is the most current year of data readily available to us at no cost, which was an important consideration in our efforts to explore whether we could successfully complete this analysis. We provide a snapshot of the financial lives of presumed Black and white bankruptcy filers in Washington, D.C., including their income, expenses and assets at the time they file for bankruptcy. For example, we report that the bulk of debtor's assets is held in homes, vehicles, retirement accounts and household goods.<sup>4</sup> By contrast, insurance products are not a major asset for many debtors.

We find that facially race-neutral bankruptcy laws can contribute to racially disparate outcomes in the following ways. First, the Bankruptcy Code provides that every bankruptcy filer may retain all their retirement savings in certain tax-qualified accounts.<sup>5</sup> But the median presumed white filer enters bankruptcy with roughly 25% more

<sup>1</sup> Mechele Dickerson, Race Matters in Bankruptcy, <https://scholarship.law.missouri.edu/cgi/viewcontent.cgi?article=3711&context=mlr>. For additional citations, see *infra* note 46.

<sup>2</sup> Debtors do not report their race or ethnicity when they file bankruptcy. As a result, researchers interested in drawing comparisons based on race or ethnicity have had to use a variety of techniques to identify or impute a racial identifier for debtors. As discussed further in Sections 5.2 and 6.2, we use the Bayesian Improved Surname Geocoding (BISG) method to impute race and ethnicity. Because of the very small numbers of presumed Asian/Asian American and Hispanic/Latino filers, we limited our analysis to filings of presumed Black and white debtors. The Bayesian Improved Surname Geocoding (BISG) was created by RAND Corporation researchers in 2009 (Elliott et al 2009). More information about this technique and the role it plays in advancing equity in through data can be found on the RAND website. <https://www.rand.org/health-care/tools-methods/bisg.html#get-started>. Marc N. Elliott, Peter A. Morrison, Allen Fremont, Daniel F. McCaffrey, Philip Pantoja, and Nicole Lurie, Using the Census Bureau's Surname List to Improve Estimates of Race/Ethnicity and Associated Disparities, Health Services and Outcomes Research Methodology, June 2009. The Consumer Financial Protection Bureau (2014) also published manual which discussed the method and assesses the usefulness of BISG, entitled "Using publicly available information to proxy for unidentified race and ethnicity." [https://files.consumerfinance.gov/f/201409\\_cfpb\\_report\\_proxy-methodology.pdf](https://files.consumerfinance.gov/f/201409_cfpb_report_proxy-methodology.pdf).

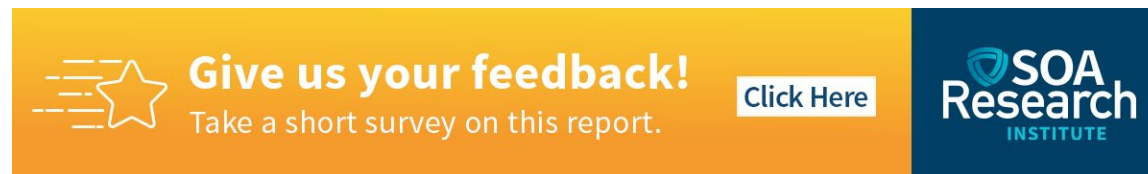
<sup>3</sup> For the sake of brevity, we will use Black in lieu of "Black or African American" for the remainder of the report.

<sup>4</sup> See *infra* Section 7.2.

<sup>5</sup> 11 U.S.C. § 522(d)(12) exempts "Retirement funds to the extent that those funds are in a fund or account that is exempt from taxation under section 401, 403, 408, 408A, 414, 457, or 501(a) of the Internal Revenue Code of 1986." Not all states allow debtors to use the federal exemptions. But, relevant for this report, the District of Columbia does allow debtors to choose the federal exemptions, and its own exemptions allow a debtor to retain their retirement savings if they represent "money or other assets payable to a participant or beneficiary from, or an interest of a participant or beneficiary in, a retirement plan qualified under sections 401(a), 403(a), 403(b), 408, 408A, 414(d), or 414(e) of the Internal Revenue Code of 1986, approved October 22, 1986 (100 Stat. 2085; 26 U.S.C. § 1 et seq.) ('1986 Code'), or section 409 (as in effect prior to January 1984) of the Internal Revenue Code of 1954, approved August 6, 1954 (68A Stat. 3; 26 U.S.C. § 1 et seq.); provided, that: (A) this paragraph shall not apply to: (i) an alternate payee under a qualified domestic relations order, as defined in section 414(p) of the 1986 Code; (ii) a retirement plan, qualified under section 401(a) of the 1986 Code, as a creditor of an individual retirement account qualified under section 408 of the 1986 Code; or (iii) any claims by, or any indebtedness, liability, or obligation owed to, the District of Columbia; (B) if a contribution to a retirement plan described in this paragraph exceeds the amount deductible or, in the case of a contribution under section 408A of the 1986 Code, the maximum contribution allowed under the applicable provisions of the 1986 Code, the portion of the contribution that

money in their retirement accounts relative to presumed Black filers. As a result, presumed white filers can exempt substantially more assets in their retirement accounts (~\$13,500) than presumed Black filers (~\$6,500). Second, presumed white filers retain far more home equity<sup>6</sup> than presumed Black filers. The mean exemption claimed by presumed white debtors is \$198,232, which is substantially larger than that claimed by presumed Black debtors (\$105,523). That is, the average presumed Black filer retains 46% less in home equity than presumed white filers.

Bankruptcy law is meant to offer a fresh start to honest but unfortunate debtors.<sup>7</sup> Home equity and retirement assets are unevenly distributed in our sample across presumed Black and white debtors. Although bankruptcy laws do not create the differences in values of presumed Black and white filers' retirement savings and home values, our analysis shows that in Washington, DC, they do nothing to mitigate these differences. This study is limited because it used 11-year-old data from a single jurisdiction. A study across all jurisdictions and across multiple years would provide a more complete review of the social implications of Bankruptcy Code in the U.S.



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exceeds the amount deductible or, in the case of a contribution under section 408A of the 1986 Code, the maximum contribution allowed, and any accrued earnings on such portion, are not exempt" § 15-501(a)(9).

<sup>6</sup>We will refer to the homestead exemption as pertaining to home equity in several places. This is an oversimplification, but hopefully the aid to clarity outweighs the costs to accuracy. For a further discussion, see *infra* note 105.

<sup>7</sup>*Marrama v. Citizens Bank of Mass.*, 127 S.Ct. 1105, 367 ("The principal purpose of the Bankruptcy Code is to grant a 'fresh start' to the 'honest but unfortunate debtor.'") (quoting *Grogan v. Garner*, 498 U.S. 279, 286, 287, 111 S.Ct. 654, 112 L.Ed.2d 755 (1991)).

## Section 1: Introduction

Although U.S. bankruptcy law is race-neutral on its face, bankruptcy scholars have theorized that it has racially disparate effects.<sup>8</sup> For example, the Bankruptcy Code advantages white people because it provides certain benefits to homeowners that it does not provide to renters, and, nationwide, white people are substantially more likely to be homeowners than other racial or ethnic groups.<sup>9</sup> Similarly, bankruptcy law generally advantages people who have retirement savings in certain qualified accounts<sup>10</sup> by allowing debtors to keep their equity in those accounts, and, nationwide, white Americans are more likely to have such accounts than other racial or ethnic groups.<sup>11</sup> As a result, scholars such as Professor Mechele Dickerson at the University of Texas School of Law have argued that the Bankruptcy Code favors white debtors over debtors of other races.<sup>12</sup> Before this report, however, no empirical work had established whether these racial disparities actually exist in bankruptcy, nor had anyone quantified them.<sup>13</sup>

This report provides details of original research quantifying racial disparities in personal bankruptcy cases filed in Washington, D.C., in 2011. In particular, we evaluate some of the first empirical evidence for Professor Dickerson's theory by looking at the role that exemptions (the method for providing preferential treatment to certain assets in bankruptcy) play in perpetuating or increasing wealth inequality across Black and white Americans.<sup>14</sup> This report details the frequency and value of real and personal property ownership in bankruptcy for residents of Washington in 2011. Studied property includes retirement account ownership and the rate of insurance policy ownership. Studied property also includes the ownership rates and value of apparel, jewelry, cash and cash equivalents, other household goods, vehicles and homes.

We offer two primary contributions. First, we examine racial disparities in bankruptcy cases that emerge despite the facially neutral Bankruptcy Code exemptions. Second, we create a new dataset of bankruptcy data based on a random sample of petitions drawn from the United States Bankruptcy Court for the District of Columbia, all of which were filed in 2011. This dataset will be made available to other researchers in the future.<sup>15</sup>

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<sup>8</sup> Mechele Dickerson, Race Matters in Bankruptcy, <https://scholarship.law.missouri.edu/cgi/viewcontent.cgi?article=3711&context=mlr>. For additional citations, see *infra* note 46.

<sup>9</sup> *Id.* ("There is, again, a significant racial disparity in homeownership. ... However, homeownership rates for whites in 2005 (75%) far exceeded the rates for blacks (less than 49%), Hispanics (less than 50%), Native Americans (58%), and Asians (60%).")

<sup>10</sup> 11 U.S.C. § 522(d)(12) exempts "Retirement funds to the extent that those funds are in a fund or account that is exempt from taxation under section 401, 403, 408, 408A, 414, 457, or 501(a) of the Internal Revenue Code of 1986." Not all states allow debtors to use the federal exemptions. But, relevant for this report, the District of Columbia does allow debtors to choose the federal exemptions, and its own exemptions allow a debtor to retain their retirement savings if they represent "money or other assets payable to a participant or beneficiary from, or an interest of a participant or beneficiary in, a retirement plan qualified under sections 401(a), 403(a), 403(b), 408, 408A, 414(d), or 414(e) of the Internal Revenue Code of 1986, approved October 22, 1986 (100 Stat. 2085; 26 U.S.C. § 1 et seq.) ('1986 Code'), or section 409 (as in effect prior to January 1984) of the Internal Revenue Code of 1954, approved August 6, 1954 (68A Stat. 3; 26 U.S.C. § 1 et seq.); provided, that: (A) this paragraph shall not apply to: (i) an alternate payee under a qualified domestic relations order, as defined in section 414(p) of the 1986 Code; (ii) a retirement plan, qualified under section 401(a) of the 1986 Code, as a creditor of an individual retirement account qualified under section 408 of the 1986 Code; or (iii) any claims by, or any indebtedness, liability, or obligation owed to, the District of Columbia; (B) if a contribution to a retirement plan described in this paragraph exceeds the amount deductible or, in the case of a contribution under section 408A of the 1986 Code, the maximum contribution allowed under the applicable provisions of the 1986 Code, the portion of the contribution that exceeds the amount deductible or, in the case of a contribution under section 408A of the 1986 Code, the maximum contribution allowed, and any accrued earnings on such portion, are not exempt" § 15-501(a)(9).

<sup>11</sup> Mechele Dickerson, Race Matters in Bankruptcy, <https://scholarship.law.missouri.edu/cgi/viewcontent.cgi?article=3711&context=mlr> ("it is not surprising that minorities have smaller ... amounts and values of tax-deferred retirement accounts").

<sup>12</sup> Professor Dickerson has argued that bankruptcy law favors certain white debtors over other racial groups by, among other things, allowing debtors to retain their equity in assets that white debtors are more likely to own. *Id.* (reviewing the types of assets given preferential treatment in bankruptcy and the prevalence of these assets held by various racial groups outside of bankruptcy).

<sup>13</sup> At least one paper has quantified the percentage of filers with retirement accounts and the value of those accounts, but the authors do not separate out those numbers by the race or ethnicity of the person who holds those accounts. Pamela Foohey, Robert M. Lawless & Deborah Thorne, Portraits of Bankruptcy Filers, 56 Ga. L. Rev., Forthcoming 2022, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3807592](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3807592) (providing evidence of the rates of retirement account ownership by debtors and the value of those accounts).

<sup>14</sup> We limited our analysis to filings of presumed Black and white debtors because of the very small numbers of presumed Asian/Asian American and Hispanic and Latino filers in our sample.

<sup>15</sup> Interested researchers should contact any of the report's authors.

## Section 2: The Racial Wealth Gap

This report explores wealth differences between presumed Black and white Washingtonians who filed for bankruptcy in the District of Columbia in 2011. A racial wealth gap exists in America, with typical white families holding eight times more wealth than typical Black families and five times more than typical Hispanic families.<sup>16</sup> According to data from the 2019 Survey of Consumer Finances, the median white household in America had a net household wealth (\$188,200) that was approximately eight times greater than the median Black household (\$24,100).

Although we hope this report informs conversations about racial wealth inequality across America, our empirical estimates are obtained from documents filed in Washington, D.C., in 2011. In Washington around that time, the wealth gap between Black and white households appears to be greater than the national wealth divide. The Urban Institute reports that in 2013–14, white households in the District of Columbia had a net worth more than 80 times greater than the typical Black household.<sup>17</sup> In other words, the racial wealth gap appears to be almost 10 times larger in the district than the national wealth gap. The Urban Institute also reports that Black families own homes that are valued “significantly lower” than those owned by white families.<sup>18</sup> Similar results were found in other asset categories as well, with white families being more likely to have liquid assets,<sup>19</sup> checking accounts,<sup>20</sup> other financial assets, such as stocks, bonds and mutual funds,<sup>21</sup> vehicles<sup>22</sup> and retirement funds.<sup>23</sup> White “households had the highest median value of liquid assets,” at \$65,000. “The median value was only \$5,000 for U.S. Black households [and] \$2,100 for African Black households.”<sup>24</sup>

Black Washingtonians have “higher homeownership rates than Black Americans living elsewhere. ... Whites also have higher homeownership rates, but the difference from Whites nationally is smaller.”<sup>25</sup> In other words, although white Washingtonians are more likely to own homes than Black Washingtonians, the racial homeownership gap is smaller in the district than it is nationally.<sup>26</sup> This is important because home ownership has traditionally been an important path to wealth building in this country and has, therefore, been an important component of the racial wealth gap.<sup>27</sup>

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<sup>16</sup> <https://www.federalreserve.gov/econres/notes/feds-notes/disparities-in-wealth-by-race-and-ethnicity-in-the-2019-survey-of-consumer-finances-20200928.htm> (defining wealth as “the difference between families’ gross assets and their liabilities”).

<sup>17</sup> “[T]he typical White household in D.C. had a net worth of \$284,000. Black American households, in contrast, had a net worth of \$3,500.”

[https://www.urban.org/sites/default/files/publication/85341/2000986-2-the-color-of-wealth-in-the-nations-capital\\_8.pdf](https://www.urban.org/sites/default/files/publication/85341/2000986-2-the-color-of-wealth-in-the-nations-capital_8.pdf).

<sup>18</sup> “The typical home value for Black households in D.C. is \$250,000, about two-thirds of the home value for White and Latino households.” *Id.*

<sup>19</sup> “Nearly all White households in Washington, D.C. (97.0 percent), possessed liquid assets (table 3). ... U.S. Black (79.2 percent), African Black (78.5 percent), and Latino (86.0 percent) households had lower shares of liquid asset ownership.” *Id.* at 47.

<sup>20</sup> “Fewer U.S. Black households (67.7 percent) owned checking accounts than White households (91.8 percent). African Black and Latino households were also less likely than Whites to have checking accounts. However, the differences were not statistically significant.” *Id.*

<sup>21</sup> “All non-White groups in the NASCC sample reported lower shares of households that own other financial assets, such as stocks, bonds, and mutual funds.” *Id.* (“While 52.8 percent of White households owned stocks, only 18.6 percent of U.S. Black, 14.6 percent of African Black.”)

<sup>22</sup> *Id.* at 54 (“Car ownership was high among all groups in Washington, DC. U.S. Black households had the lowest rate of car ownership (78.0 percent) while all other groups had car ownership rates above 90 percent.”).

<sup>23</sup> “For most groups in the District, the share of households owning individual retirement accounts or private annuities was larger than the share owning stocks. ... White (64.2 percent), ... households had the highest ownership rates. U.S. Black households (26.4 percent), African Black households (28.6 percent) ... had significantly lower rates of ownership than other groups.” *Id.* at 48.

<sup>24</sup> *Id.* at 55.

<sup>25</sup> *Id.* (capitalization of white was in the original text).

<sup>26</sup> *Id.* at 51–52 (“Homeownership rates vary widely by race and ethnicity in Washington, DC. Seventy-eight percent of White households owned their homes. ... Black and Latino households had the lowest homeownership rates. Only 58.4 percent of U.S. Black, 46.1 percent of African Black, and 49.7 percent of Latino households reported owning a home.”)

<sup>27</sup> See *infra* Section 7.1 (discussing our findings about home ownership rates by race in our data).

## Section 3: Bankruptcy Basics

Hundreds of thousands of people file for bankruptcy in the United States every year.<sup>28</sup> Many more would likely benefit from bankruptcy by discharging their debts while retaining their assets but do not file for various reasons.<sup>29</sup> In particular, Professor Dickerson suggests that there are good reasons to believe that white Americans are more likely to benefit from bankruptcy than Black Americans.<sup>30</sup> Nevertheless, researchers have repeatedly found that Black Americans are more likely to use bankruptcy.<sup>31</sup>

The Bankruptcy Code provides two primary options for individuals who seek debt relief: chapter 7 and chapter 13. Historically, chapter 7 is favored by approximately two-thirds of consumer debtors.<sup>32</sup> The “deal” in chapter 7 is that a person may keep all their future income but must give up many of their current assets.<sup>33</sup> By contrast, the deal in chapter 13 generally allows a person to keep most of their current assets but they must give up all their disposable income for three to five years.<sup>34</sup> Whichever chapter a person chooses, they initiate their bankruptcy case by filing a petition with the bankruptcy court.

Filing a petition creates the so-called “bankruptcy estate,” which comprises all the debtor’s assets when they initiate their case. All the debtors’ assets, including their retirement accounts, insurance policies, cars, houses, jewelry, clothing and furniture, become part of the pool of assets that may be used to satisfy their creditors. They are required to list all their assets on a form called a schedule.<sup>35</sup> In a chapter 7 bankruptcy, these assets are often sold, and the proceeds are distributed to creditors in partial satisfaction of the debts the debtor owes them.

But not all of a debtor’s assets must be sold. Whether they file under chapter 7 or chapter 13, debtors may keep some amount of their property, referred to as an exemption.<sup>36</sup> In some states and the District of Columbia, debtors may choose between federal exemptions and state or district exemptions. In the District of Columbia, debtors may exempt all the equity in their homes. By contrast, current federal law allows a debtor to retain only approximately

<sup>28</sup> Pamela Foohey, Robert M. Lawless & Deborah Thorne, Portraits of Bankruptcy Filers, 56 Ga. L. Rev., Forthcoming 2021, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3807592](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3807592) (“In the past decade alone, from 2009 to 2018, over 11 million individuals filed bankruptcy.”).

<sup>29</sup> Michelle White, Why Don’t More Households File for Bankruptcy?, 14 J. L. Econ. & Org. 205 (1998), <https://econweb.ucsd.edu/~miwhite/white-jleo-reprint.pdf> (claiming that “A much higher fraction of U.S. households would benefit financially from bankruptcy than actually file. While the current bankruptcy filing rate is about 1% of households each year, I calculate that at least 15% of households would benefit financially from filing and the actual figure would be several times higher if most households plan in advance for the possibility of filing.” The author also discusses two reasons for “missing” bankruptcy filings, including when creditors do not take legal action against debtors (who then “get the benefit of default without bearing the cost of a bankruptcy filing[],” and the option value of a future bankruptcy filing.).

<sup>30</sup> Mechele Dickerson, Race Matters in Bankruptcy, <https://scholarship.law.missouri.edu/cgi/viewcontent.cgi?article=3711&context=mlr> (“After examining census and other empirical data, I concluded that the Ideal Debtor is white and, for that reason, race mattered in bankruptcy.”); see also Pamela Foohey, Robert M. Lawless & Deborah Thorne, Portraits of Bankruptcy Filers, 56 Ga. L. Rev., Forthcoming 2021, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3807592](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3807592) (identifying three themes among bankruptcy filers, including (1) some people file because they can capture the financial benefits of bankruptcy; (2) others file because bankruptcy offers certain protections from lawsuits, such as the automatic stay; and, finally, (3) still others file because they have unsustainable debts).

<sup>31</sup> “Black Americans are overrepresented among bankruptcy filers.” Alicia Louise Duncombe, Race and the Educational Disparities in Midlife Bankruptcy Filings, M.A. Thesis (2020), <https://repositories.lib.utexas.edu/bitstream/handle/2152/87144/DUNCOMBE-THESIS-2020.pdf?sequence=1&isAllowed=y>; Pamela Foohey, Robert M. Lawless & Deborah Thorne, Portraits of Bankruptcy Filers, 56 Ga. L. Rev., Forthcoming 2021, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3807592](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3807592) (“Black households file bankruptcy at more than twice the rate they appear in the general population.”).

<sup>32</sup> Pamela Foohey, Robert M. Lawless & Deborah Thorne, Portraits of Bankruptcy Filers, 56 Ga. L. Rev., Forthcoming 2021, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3807592](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3807592).

<sup>33</sup> Robert M. Lawless & Angela Littwin, Local Legal Culture from R2D2 to Big Data, 96 Tex. L. Rev. 1333 (2018) (“Under chapter 7, debtors liquidate all of their nonexempt property and receive a discharge of most unsecured debts.”).

<sup>34</sup> *Id.* (“chapter 13 ... requires debtors to pay all of their disposable income over a period of three to five years [and] does provide tools for some consumers trying to save their homes and a broader discharge than chapter 7.”).

<sup>35</sup> Debtors list all of their legal and equitable interests in a residence, building, land or similar property (including burial plots) on schedule A. Personal property is listed on schedule B. These forms are available at <https://www.uscourts.gov/forms/individual-debtors/schedule-ab-property-individuals>.

<sup>36</sup> For this reason, we do not separately analyze chapter 7 and chapter 13 petitions. See also Pamela Foohey, Robert M. Lawless & Deborah Thorne, Portraits of Bankruptcy Filers, 56 Ga. L. Rev., Forthcoming 2021, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3807592](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3807592) (“The debtor can exempt specific assets from their bankruptcy estate. The chapter 7 trustee sells nonexempt assets in the estate and distributes the proceeds to creditors.”).



\$25,000 in home equity.<sup>37</sup> All exemption laws limit the amount of property a debtor may retain on a category-by-category basis. In other words, a person claiming the federal exemptions in 2021 may retain up to \$25,150 in home equity and up to \$4,000 in one vehicle. They may not, however, retain \$29,000 in home equity and give up their vehicle.

Several reasons can be identified to allow debtors to keep some amount of their property even though they owe their creditors more than they can repay. First, some assets are worth far more to the debtor than they are to the creditor. For example, family photographs normally have sentimental value to the debtor but would not fetch much if they were sold. Second, if creditors were allowed to seize and sell assets with substantial sentimental value but low economic value, debtors might be willing to pay their creditors a significant amount to keep them, hindering their return to an economically productive life. A third reason to allow debtors to keep some base level of assets is that debtors deprived of all their food, shelter and clothing would probably need to turn to others for assistance. Rather than allow creditors to literally seize the shirt off a debtor's back, unsecured creditors are forced to allow debtors to keep some modest amount of assets. The debtor lists the property they claim as exempt on schedule C.<sup>38</sup>

In exchange for giving up their *nonexempt* property, the remainder of a person's unsecured<sup>39</sup> debts are forgiven (discharged) and need not be repaid.<sup>40</sup> "Chapter 7 thus is considered to be most useful to people with few assets of value that they want to keep, those with considerable unsecured debts that they hope to discharge, and those who do not own homes."<sup>41</sup>

By contrast, "Chapter 13 requires repayment to creditors over a three- to five-year repayment plan that is funded by a debtor's 'disposable income.'"<sup>42</sup> "In return, the debtor keeps all property regardless of exemptions and is allowed to use the property during the pendency of the case."<sup>43</sup> Chapter 13 is thought to be particularly useful if a person wishes to keep their house, but can also help people keep their cars.

Far fewer chapter 13 plans are successful than chapter 7 plans, however, which complicates the narrative about chapter choice being simply about which deal is preferable to the debtor. Only about one-third of chapter 13 cases end with the debtor receiving a discharge of their remaining debts.<sup>44</sup> For the other two-thirds of cases, debtors do not receive the anticipated debt forgiveness and remain "personally liable for all debts not paid during the chapter 13 case, potentially including additional accrued interest and fees."<sup>45</sup>

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<sup>37</sup> This number increases every three years and was closer to \$20,000 in 2011. 11 U.S.C. § 104(b).

<sup>38</sup> Schedule C is available at <https://www.uscourts.gov/forms/individual-debtors/schedule-c-property-you-claim-exempt-individuals>. This form is used in both chapter 7 and chapter 13.

<sup>39</sup> Personal liability on secured debts is also discharged but not the in rem liability. In other words, a secured creditor's lien remains on the property, and they may be able to repossess that property if the debtor defaults on their repayment obligations.

<sup>40</sup> Some debts are nondischargeable and must be repaid anyway. See 11 U.S.C. §§ 523 and 727.

<sup>41</sup> Pamela Foohey, Robert M. Lawless & Deborah Thorne, Portraits of Bankruptcy Filers, 56 Ga. L. Rev., Forthcoming 2021, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3807592](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3807592).

<sup>42</sup> *Id.*

<sup>43</sup> *Id.*

<sup>44</sup> *Id.* Chapter 13 plans fail for many reasons, including the debtor's lack of resources, disruptions in income and expenses, insufficient advanced planning and, sometimes, by design. See Carron Armstrong, *Why Do So Many Chapter 13 Cases Fail?*, The Balance (Feb. 28, 2022), <https://www.thebalance.com/why-do-so-many-chapter-13-cases-fail-316195>.

<sup>45</sup> Pamela Foohey, Robert M. Lawless & Deborah Thorne, Portraits of Bankruptcy Filers, 56 Ga. L. Rev., Forthcoming 2021, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3807592/](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3807592/).

## Section 4: Literature Review

The empirical literature on bankruptcy law and race is limited.<sup>46</sup> And the literature on bankruptcy, race and wealth is even smaller.<sup>47</sup> Overall, this work generally shows that Black debtors and entities affiliated with Black people (e.g., Black-owned businesses) fare worse in the bankruptcy process than their white counterparts.<sup>48</sup> For example, Professors Braucher, Cohen, and Lawless find that, by ending up in chapter 13 bankruptcies, Black debtors are more likely to fare worse than similarly situated white debtors because those bankruptcy cases are more likely to end without the debtor receiving a discharge.<sup>49</sup> Professor Pamela Foohey has also argued that Black churches may pay more for credit and may be less likely to get a consensual loan modification, leading Black churches—those “[c]hurches with predominately Black membership”—to appear “in Chapter 11 [bankruptcy] more than three times as often as they appear among churches across the country.”<sup>50</sup> And Professor A. Mechele Dickerson’s work has drawn on summary statistical data (rather than bankruptcy petitions) to argue that the bankruptcy system is more likely to benefit white debtors than Black debtors.<sup>51</sup>

It is difficult to test some theories about bankruptcy filers empirically. Individual-level bankruptcy data are not readily available for most researchers to analyze. Most researchers in this area have needed to rely on creative empirical strategies, including surveys of bankruptcy professionals, online experiments, administrative data from specific metropolitan areas and court records.<sup>52</sup> The overall goal of this project is to help address this problem by creating a unique dataset from which these empirical questions regarding race and bankruptcy can be examined and to report on the results of our analysis of this new dataset.

One of the most interesting research projects to date in this area is from Professors Pamela Foohey, Robert M. Lawless and Deborah Thorne. Their forthcoming article “Portraits of Bankruptcy Filers”<sup>53</sup> finds that “Black households file bankruptcy at more than twice the rate they appear in the general population.”<sup>54</sup> Robert Lawless (writing with Professor Angela Littwin this time) also reports on earlier race-related bankruptcy research in “Local Legal Culture from R2D2 to Big Data.”<sup>55</sup> There, Lawless and Littwin write about the history of race-related bankruptcy research, which they date as beginning in 1991. They report that researchers found “Black debtors, and

<sup>47</sup> Pamela Foohey, Robert M. Lawless & Deborah Thorne, Portraits of Bankruptcy Filers, 56 Ga. L. Rev., Forthcoming 2021, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3807592](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3807592).

<sup>47</sup> Pamela Foohey, Robert M. Lawless & Deborah Thorne, Portraits of Bankruptcy Filers, 56 Ga. L. Rev., Forthcoming 2021, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3807592](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3807592).

<sup>48</sup> For example, in Race, Attorney Influence, and Bankruptcy Chapter Choice, 9 J. Empirical Legal Stud. 393 (2012), Jean Braucher, Dov Cohen & Robert M. Lawless find that Black debtors are steered toward filing bankruptcy under chapter 13 even though approximately two-thirds of those cases end without the debtor receiving a discharge.

<sup>49</sup> *Id.*

<sup>50</sup> Pamela Foohey, Lender Discrimination, Black Churches, and Bankruptcy, 54 Houston L. Rev. 1079, 1079 (2017).

<sup>51</sup> *Id.*

<sup>52</sup> Research done by the Consumer Bankruptcy Project (CBP) is an exception, but their data are not publicly available.

<sup>53</sup> 56 Georgia L. Rev., Forthcoming 2021, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3807592](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3807592).

<sup>54</sup> *Id.* (citing Robert M. Lawless & Angela Littwin, Local Legal Culture from R2D2 to Big Data, 96 Tex. L. Rev. 1333 (2018) (detailing racial disparities in filing chapter 7 and 13 based on filings between 2012 and 2016)); Pamela Foohey, Robert M. Lawless, Katherine Porter & Deborah Thorne, “No Money Down” Bankruptcy, 90 S. Cal. L. Rev. 1055 (2017) (analyzing data from the 2007 and 2013–2015 CBPs to detail racial disparities in chapter choice and its intersection with attorneys’ fees and payment timing); Sara Sternberg Greene, Parina Patel & Katherine Porter, Cracking the Code: An Empirical Analysis of Bankruptcy Success, 101 Minn. L. Rev. 1031 (2017) (assessing based on people who filed in 2007 the predictors of obtaining a discharge in chapter 13); Jean Braucher, Dov Cohen & Robert M. Lawless, Race, Attorney Influence, and Bankruptcy Chapter Choice, 9 J. Empirical Legal Stud. 393 (2012) (documenting disparities in chapter filing based on race and connecting the disparity to attorneys’ influence in chapter choice); Lois R. Lupica, The Costs of BAPCPA: Report of the Pilot Study of Consumer Bankruptcy Cases, 18 Am. Bankr. Inst. L. Rev. 43 (2010) (detailing changes in attorneys’ fees and outcomes in light of the 2005 amendments to the Bankruptcy Code); Rory Van Loo, A Tale of Two Debtors: Bankruptcy Disparities by Race, 72 Albany L. Rev. 231 (2009) (finding that Black debtors are 40% and Latinx debtors are 43% less likely than white debtors to receive a discharge in chapter 13 after controlling for variables that may influence the incidence of discharge); Angela Littwin, The Do-It-Yourself Mirage: Complexity in the Bankruptcy System, in *Broke: How Debt Bankrupts the Middle Class* 85–100 (Katherine Porter ed., 2012) (relying on 2007 CBP data to detail the characteristics of debtors who succeed without an attorney); Sumit Agarwal, Souphala Chomsisengphetz, Robert McMenamin & Paige Marta Skiba, Dismissal with Prejudice? Race and Politics in Personal Bankruptcy, 5th Annual Conference on Empirical Legal Studies Paper (2012), <https://ssrn.com/abstract=1633083> (predicting dismissal rates based on debtor household’s race).

<sup>55</sup> Robert M. Lawless & Angela Littwin, Local Legal Culture from R2D2 to Big Data, 96 Tex. L. Rev. 1333 (2018).

sometimes Latino debtors, were overrepresented in chapter 13, the chapter that takes more time, costs more money, and has a significantly lower discharge rate.”<sup>56</sup> This finding aligns with prior research by Professors Michelle White and Robert Chapman, which found “that the percentage of African-American debtors in a county’s population was associated with a statistically significant increase in the proportion of chapter 13 cases,” but finding “no statistically significant relationship between African-Americans and chapter 7 filings.”<sup>57</sup>

Our contribution to the literature is to look at differences by race in bankruptcy exemptions. This has not been done previously.

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<sup>56</sup> *Id.* (“These patterns remained even when controlling for income, homeownership, and a variety of other factors associated with chapter 13. Research from the 2007 CBP additionally controlled for judicial district and found that the correlations between chapter 13 and black debtors remained significant. An article based on the 2007 and 2013–2015 CBPs found that judicial districts with high chapter 13 rates significantly correlated with the overrepresentation of black debtors in chapter 13—and that the effect of judicial district became more pronounced once researchers controlled for debtor financial variables associated with chapter 13.”)

<sup>57</sup> *Id.* (discussing work by Michelle J. White in *Personal Bankruptcy under the 1978 Bankruptcy Code: An Economic Analysis*, 63 *Ind. L.J.* 1, 48 (1987) and Robert B. Chapman in *Missing Persons: Social Science and Accounting for Race, Gender, Class, and Marriage in Bankruptcy*, 76 *Am. Bankr. L.J.* 347, 387 n.226 (2002)) (“Using data from the 1991 CBP, Chapman found that although African-Americans appeared to be overrepresented in consumer bankruptcy, they were not overrepresented in chapter 7, which implied that they were overrepresented in chapter 13.”).

## Section 5: The Dataset

Data for this report were obtained from 501 bankruptcy petitions and associated documents filed in the United States Bankruptcy Court for the District of Columbia in 2011.<sup>58</sup> These petitions were sampled randomly from the 959 total bankruptcy petitions filed in the district that year.<sup>59</sup> Data from 2011 were used because it is the most current year of data readily available to us at no cost, which was an important consideration in our efforts to explore whether we could complete this analysis. Similarly, given the difficulties of accessing data from multiple jurisdictions, data for this exploratory analysis are limited to a single jurisdiction. Having successfully completed this exploratory study, we recognize the need for future similar studies that span multiple years and jurisdictions.

Debtors must provide a substantial amount of demographic (e.g., name, address, Social Security number etc.) and financial information (e.g., assets and liabilities, monthly income and expenses) when they use the bankruptcy system.<sup>60</sup> For this project we focused in particular on the reported value of the debtor's real and personal property at the time the bankruptcy case is filed.<sup>61</sup>

These petitions and associated documents were generously made available to our team by [Jialan Wang](#), assistant professor of finance at Gies College of Business, University of Illinois Urbana-Champaign, who obtained them from the Public Access to Court Electronic Records (PACER) website as part of an unrelated project.<sup>62</sup> Documents obtained from PACER are generally available as scans of original handwritten petitions or as copies of electronically submitted documents. Professor Wang provided us with the bankruptcy petition, the summary of schedules and all of the debtor's schedules (including any amended schedules). Other documents were also occasionally available.

Debtor's documents were often provided as a single PDF file, but it was also common to find the documents split across several files. Generally, the entire set of documents for each debtor was between 38 and 52 pages. For analysis, the relevant information from each document had to be converted to a machine-readable spreadsheet format. Because files were all from the same court and the same year, the documents generally followed a similar structure. Information needed for the analyses was reported in a consistent way across documents, but the multiple file structure of some petitions, that some were handwritten, that certain elements of petitions are not included by every debtor (e.g., a debtor's attorney sometimes included a disclosure of attorney compensation as the first page in the file), as well as variation in the order in which individual sections of documents were included in each petition meant that the data-coding process could not straightforwardly be automated. Given these issues, research assistants were hired to code information from each petition manually.

### 5.1 DATA ENTRY WORK

Under the supervision of Matthew Bruckner, two research assistants were hired from Howard University School of Law's second year class to code each petition. Each coder entered information for up to 89 variables per debtor for each of the 501 debtors included in our random sample. We had each coder independently code each variable to

<sup>58</sup> We chose 2011 because it was the most recent year available in the data provided to us by Jialan Wang. The year 2011 appears to be a rather average year for bankruptcy filings in the District of Columbia. It is substantially after the last major revision to the Bankruptcy Code (the 2005 amendments), which dramatically altered filings in 2004–2006, and it is a few years after the Great Recession. Also, we are primarily interested in consumer bankruptcy filings; the new small business bankruptcy provisions are not of particular interest for this paper. We chose the district because two researchers are located there and because of its substantial Black population.

<sup>59</sup> [https://www.dcb.uscourts.gov/sites/dcb/files/stats\\_dec2011.pdf](https://www.dcb.uscourts.gov/sites/dcb/files/stats_dec2011.pdf) (reporting 959 total bankruptcy filings in the district in 2011, including 773 chapter 7 petitions, 154 chapter 13 petitions and 32 chapter 11 petitions).

<sup>60</sup> Official form 101 is the Voluntary Petition for Individuals Filing for Bankruptcy and is available online:

[https://www.uscourts.gov/sites/default/files/b\\_101.pdf](https://www.uscourts.gov/sites/default/files/b_101.pdf); <https://www.nolo.com/legal-encyclopedia/what-is-a-bankruptcy-petition.html>.

<sup>61</sup> As a result, any changes made to the debtor's claimed exemptions because of objections from a trustee or otherwise may not be fully captured in our data.

<sup>62</sup> <https://pacer.uscourts.gov/>.

increase the accuracy of our dataset. These variables include information about the debtor themselves, such as their name, address and the last four digits of their Social Security number. Coders also collected information about the case, such as whether the debtor had filed a previous bankruptcy, was represented by an attorney or assisted by a petition preparer, which chapter of the bankruptcy code the case was filed under, and whether the case involved primarily business or consumer debts.<sup>63</sup>

Coders collected financial information from the debtors' petitions, including information about the assets debtors had at the time they filed their bankruptcy petition.<sup>64</sup> For example, debtors are asked if they have a checking account and the amount of money in their checking account. They are also asked if they have a variety of other assets, such as household goods, furniture, clothing, appliances, books, animals, crops and jewelry. If debtors had such items, coders entered the value the debtors listed for such items on their schedules.

In addition, coders also collected information from the debtors' petitions about the debtors' claimed exemptions.<sup>65</sup> Coders described the item that was claimed as exempt and the value of the claimed exemption. For example, a debtor might enter bankruptcy with a 1992 Toyota Camry with a fair market value of \$2,375.<sup>66</sup> Under 11 U.S.C. §522(d)(2), a debtor filing for bankruptcy in 2011 was allowed to keep up to \$3,225 in equity in one motor vehicle.<sup>67</sup> If they claimed that exemption, the coders included it in our dataset. Coders also noted whether the debtor claimed the District of Columbia or federal exemptions. In all, the coders collected data from the bankruptcy petition, the statistical summary of certain liabilities and related data, the summary of schedules, and schedules A, B, C, F, I and J.

Information from each petition could sometimes be copied directly (when petitions were filed electronically) but sometimes needed to be deciphered from handwritten petitions. Once each coder had individually collected all the relevant data from all petitions, the results were compared for inconsistencies across coders. To identify any inconsistencies, we first compared entries for petitioner names. We found approximately 110 nonmatches in the debtors' names across 501 debtors, mostly caused by small typographical errors or inconsistent use of middle names or other designations (e.g., Jr.). Given the importance of debtors' names for our project (see the next section on estimating a racial identity proxy) we had coders check every nonmatching petition against the original record and make corrections where necessary.

For the remaining variables, comparison revealed mismatches on 3,778 individual data cells out of a total of 23,700, a roughly 16% error rate. Mismatches were distributed fairly evenly across debtors, with nearly every debtor (480 of 501) having a mismatch for at least one of the 89 variables coded. Half of the debtors had mismatches across four or fewer variables, and 90% had mismatches across fewer than 10. Most mismatches appear to be the result of typographical errors or arose because of unclear information on the petitions themselves. For example, coders were asked to identify the amount of medical debt listed on the debtors' schedule F. Some debtors describe medical debt clearly, listing specific liabilities as "medical debt." Other entries, however, might list a veterinary hospital or a medical device as the liability source, and coders' judgements sometimes varied. To correct for mismatches, each

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<sup>63</sup> These data may be made available to other researchers upon request to the authors.

<sup>64</sup> This information was pulled from schedules A and B.

<sup>65</sup> This information was pulled from schedule C.

<sup>66</sup> This would be listed on schedule B as an asset.

<sup>67</sup> Exemption amounts are updated every three years pursuant to 11 U.S.C. § 104 "to reflect the change in the Consumer Price Index for All Urban Consumers, published by the Department of Labor, for the most recent 3-year period ending immediately before January 1 preceding such April 1, and (2) to round to the nearest \$25 the dollar amount that represents such change." For a debtor filing in 2011, the applicable exemption amounts are set forth in 75 F.R. 8747, which was effective as of Apr. 1, 2010.

coder was provided additional instructions and compared mismatched entries to the original record until all mismatches were corrected.<sup>68</sup>

## 5.2 RACE VARIABLE

Debtors are not asked to identify themselves by race or ethnicity on bankruptcy petitions. As a result, researchers interested in drawing comparisons based on race have had to use a variety of techniques to identify or impute a racial identifier for debtors. We coded debtors by the race of the petition filer, even if they filed a petition jointly with another person.

Some researchers obtain debtors' race from survey data.<sup>69</sup> For example, in "A Tale of Two Debtors: Bankruptcy Disparities by Race," Professor Rory Van Loo uses data provided by the 2001 Consumer Bankruptcy Project.<sup>70</sup> In that article, Professor Van Loo explains that information about the race of "debtors came from . . . questionnaires [that asked debtors for] demographic information such as race, level of education, and whether the debtor owned a home and was employed." This survey-based approach has been used by the Consumer Bankruptcy Project's various iterations, including the 2007 Consumer Bankruptcy Project and since 2013 when the Consumer Bankruptcy Project "was relaunched as an ongoing data collection effort."<sup>71</sup>

Another research strategy is to match Census data to a database of bankruptcy cases "to estimate demographic and other characteristics by matching debtor zip codes to those in the Census database."<sup>72</sup>

Other researchers, including us, impute the debtors' race from name and address. For example, in "Race and Bankruptcy: Explaining Racial Disparities in Consumer Bankruptcy," Edward R. Morrison, Belisa Pang and Antoine Uettwiller "impute the race of bankruptcy filers based on their names and addresses."<sup>73</sup> This method provides a probabilistic estimate of a person's race. Here, Morrison et al. identified a person as belonging to a particular racial group if their model "predicts a probability greater than seventy percent (our results do not change if we use a higher cutoff)."<sup>74</sup> Similarly, in "Dismissal with Prejudice? Race and Politics in Personal Bankruptcy," Sumit Agarwal, Souphala Chomsisengphet, Robert McMenamin and Paige Marta Skiba use a similar method, calculating the probability of a debtor being of a specific race by using their first and last name and their address.<sup>75</sup> Agarwal and

<sup>68</sup> To accelerate the process, each coder was responsible for recoding half of the data collection. Because coders did not review each other's work at this stage, this could increase the chances that some errors remain in the dataset and were undetected.

<sup>69</sup> We requested access to the CBP's survey data but were told that the researchers "do not have informed consent to share non-anonymous data outside the research team." Email from Bob Lawless to Matthew Bruckner received Thursday, October 8, 2020, at 10:52 AM.

<sup>70</sup> Rory Van Loo, *A Tale of Two Debtors: Bankruptcy Disparities by Race*, 72 Albany L. Rev. 231 (2009) (describing the 2001 CBP as "a large-scale longitudinal study led by professors at universities across the nation. The project was made possible through funding from the Ford Foundation, as well as grants from Harvard Law School and New York University Law School."); see also Alicia Louise Duncombe, *Race and the Educational Disparities in Midlife Bankruptcy Filings*, M.A. thesis (2020), <https://repositories.lib.utexas.edu/bitstream/handle/2152/87144/DUNCOMBE-THESIS-2020.pdf?sequence=1&isAllowed=y> (using race and ethnicity "data from the High School & Beyond (HS&B) longitudinal survey of seniors and sophomores in 1980 that was merged with administrative bankruptcy records.").

<sup>71</sup> <https://www.abi.org/feed-item/new-article-from-the-consumer-bankruptcy-project-attorneys%E2%80%99-fees-and-chapter-choice>.

<sup>72</sup> Robert M. Lawless & Angela Littwin, *Local Legal Culture from R2D2 to Big Data*, 96 Tex. L. Rev. 1333 (2018) ("Fast-forwarding to today, we obtained a database with over 12.5 million records on every U.S. bankruptcy case that was pending sometime during the government fiscal years 2012–2016. We added Census Bureau data to estimate demographic and other characteristics by matching debtor zip codes to those in the Census database.").

<sup>73</sup> The authors used data from the 2000 and 2010 censuses and an Office of the Comptroller of the Currency database in an algorithm recommended by the Consumer Financial Protection Bureau to estimate the probability that a person is African American. Edward R. Morrison, Belisa Pang & Antoine Uettwiller, *Race and Bankruptcy: Explaining Racial Disparities in Consumer Bankruptcy*, 63 J. L. Econ. 269 (2020).

<sup>74</sup> *Id.*

<sup>75</sup> Sumit Agarwal, Souphala Chomsisengphet, Robert McMenamin & Paige Marta Skiba, *Dismissal with Prejudice? Race and Politics in Personal Bankruptcy*, 5th Annual Conference on Empirical Legal Studies Paper (2012), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1633083](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1633083) ("In short, we calculate the probability that Debtor is of a specific race by combining first name, last name, and zip code to obtain varying confidence levels with which we can predict race."). Like Morrison, Pang & Uettwiller, Agarwal, Chomsisengphet, McMenamin & Skiba use data from the Census Bureau, which provides information on names by race in six "mutually exclusive categories: Non-Hispanic White, Non-Hispanic African American, Non-Hispanic Asian and Pacific Islander, Non-Hispanic American Indian and Alaskan Native, Non-Hispanic of two or more races, and Hispanic." *Id.* at 8.

colleagues use probability cutoffs of 50%, 75% and 90% in their analyses of the data.<sup>76</sup> They report that “results are unchanged” by using different probability thresholds.<sup>77</sup>

Our own approach is similar to the approach employed by Morrison et al. and by Agarwal et al. We use the Bayesian Improved Surname Geocoding (BISG) approach to proxy for missing demographic information.<sup>78</sup> The BISG method uses surname and geographic location to estimate the probability that an individual identifies as belonging to given racial and ethnic categories. The method uses a database that provides summary information on the demographic characteristics of individuals with a given surname. The database covers roughly half of all U.S. population surnames (151,671 surnames). This information is combined with Census data on the racial and ethnic composition of the population across five-digit zip codes.<sup>79</sup> Previous techniques relied on surname only or zip code only. This method was first published in 2009 and improves on previous methods of imputing race and ethnicity by incorporating both, surname and zip code methods simultaneously. Elliott et al (2009) found BISG to be 41% more efficient than surname only and over 100% more than geocoding techniques to predict race when race/ethnicity is not self-reported.<sup>80</sup> Additionally, in 2014 the Consumer Financial Protection Bureau published “Using publicly available information to proxy for unidentified race and ethnicity.” Throughout the report the authors demonstrate when and why BISG is the preferred method for imputing race in the absence of reported data on race<sup>81</sup>. Using lending data the authors in the CFPB report used the three aforementioned techniques to compare predicted race and ethnicity against self-reported data. In Table 2 on page 14 they reported white individuals self-report being white 83%, while BISG predicted individuals to be white 79.7%. Conversely using the surname only technique white was presumed 75.4% and geography only 78.6% of the time.

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<sup>76</sup> *Id.* at 9.

<sup>77</sup> *Id.* at 17.

<sup>78</sup> Marc N. Elliott, Peter A. Morrison, Allen Fremont, Daniel F. McCaffrey, Philip Pantoja, and Nicole Lurie, Using the Census Bureau’s Surname List to Improve Estimates of Race/Ethnicity and Associated Disparities, Health Services and Outcomes Research Methodology, June 2009.

<sup>79</sup> A step-by-step of the process can be found at [https://files.consumerfinance.gov/f/201409\\_cfpb\\_report\\_proxy-methodology.pdf](https://files.consumerfinance.gov/f/201409_cfpb_report_proxy-methodology.pdf).

<sup>80</sup> Elliott et al 2009 provides evidence of the usefulness of BISG.

<sup>81</sup> The Consumer Financial Protection Bureau, 2014. [https://files.consumerfinance.gov/f/201409\\_cfpb\\_report\\_proxy-methodology.pdf](https://files.consumerfinance.gov/f/201409_cfpb_report_proxy-methodology.pdf)

## Section 6: Data Description

### 6.1 DESCRIBING THE DATA

The overall aim of this project is to better understand Washingtonians who file for personal bankruptcy (chapter 7 or 13) and to observe potential differences in bankruptcy outcomes across presumed Black and white debtors. Given our focus, we drop observations who reported any business-related filings; these represented 3.5% of chapter 7 filings and 3.9% of chapter 13. For the remaining filers, more than 84% of all personal bankruptcy filers opted for chapter 7. This is similar to trends for all D.C. bankruptcy filings in 2011, in which 83% of the 927 personal bankruptcy petitions were chapter 7 filings.<sup>82</sup> Research presented in Section 4 suggests that racial and ethnic filers are more likely to file chapter 13 relative to white filers. By contrast, we did not observe a substantial difference across presumed Black and white debtors who opted for a chapter 13 bankruptcy (15% vs. 19%).

Additionally, our interests in the benefits exemption type rely on the assumption that the debtors identify some assets as exempt. Therefore, we drop 32 observations who report no exempt assets in schedule C. The observations dropped were 28.1% presumed white and 71.9% presumed Black.<sup>83</sup> Briefly, we will offer a glimpse of the 423 remaining debtors in our dataset.

In the data, debtors report a monthly mean income of approximately \$3,320 and a median monthly income of approximately \$2,880. The median monthly income is equivalent to 87% of the average income among all personal bankruptcy petitioners in our dataset. Moving forward, we offer analysis on income at the mean to cleanly assess differences about the average petitioner. Please note that in Table B1 of Appendix B we provide a more in-depth explanation and test for median-level differences.

Debtors were instructed to report average monthly income for the calendar year when reporting monthly income. The annualized income for all D.C. filers is roughly \$39,840.<sup>84</sup> In 2011, this would put the average observation above the D.C. poverty line (\$22,356 for a household of four)<sup>85</sup> but below the median yearly household income (\$63,124).<sup>86</sup> The income estimates do not seem to be driven by outliers. When limiting the data to only filers who reported income below the D.C. median, the mean income is lower (\$32,016) as one might expect. However, it is still above the D.C. poverty line. This allows us to infer that our average filer is not living in poverty but lives at a relatively low-income level nonetheless; the median filer's income is above the D.C. poverty line but substantially below the median household income.

### 6.2 DATA LIMITATIONS

The aim of this project is descriptive in nature. Our data provide a snapshot of D.C. residents who filed for bankruptcy in 2011. Although aggregated data<sup>87</sup> made available by the D.C. courts suggest that 2011 was

<sup>82</sup> These data were made available via the U.S. Bankruptcy Court of the District of Columbia. <https://www.dcb.uscourts.gov/2011-bankruptcy-statistics>.

<sup>83</sup> To ensure the integrity of our data and subsequently our results, whenever data is dropped due to a missing data problem we examine whether the data dropped might be disproportionately presumed Black or white observations.

<sup>84</sup> Median annual income of \$34,560 for all personal bankruptcy filers. This assumption seems well founded because the instructions for schedule I (where debtors report their income) indicate the following: "One easy way to calculate how much income per month is to total the payments earned in a year, then divide by 12 to get a monthly figure. For example, if you are paid seasonally, you would simply divide the amount you expect to earn in a year by 12 to get the monthly amount." [https://www.uscourts.gov/sites/default/files/instructions\\_individuals.pdf](https://www.uscourts.gov/sites/default/files/instructions_individuals.pdf).

<sup>85</sup> Unfortunately, we do not have information on the household size of filers. Therefore, we use the average U.S. household information to gauge the poverty line. The average household is slightly more than two individuals, but the average family household is more than three. We use a household size of four to be conservative when estimating the household size.

<sup>86</sup> [https://www.census.gov/newsroom/releases/archives/american\\_community\\_survey\\_acs/cb12-r25.html](https://www.census.gov/newsroom/releases/archives/american_community_survey_acs/cb12-r25.html) ("The median household income in Washington, D.C., was \$63,124 in 2011, compared with the national figure of \$50,502").

<sup>87</sup> These data were made available via the U.S. Bankruptcy Court of the District of Columbia. <https://www.dcb.uscourts.gov/2011-bankruptcy-statistics>.



substantially similar to the few years prior or after, we avoid overarching claims about D.C. bankruptcies in other years or bankruptcies in other jurisdictions. Additionally, it is important to note that each filing may report data for only a subset of the questions asked. For instance, some filers leave the expenditure or income question blank. We treat a blank answer as missing data and exclude these data points from the relevant statistical calculations, except for data in schedules B and C, where blank values indicate a lack of claimed asset or exemption and were coded as zeros.<sup>88</sup> Observations with missing values are not otherwise dropped from the dataset. This accounts for the changing number of observations across statistics; for example, Table A2 in Appendix A gives different numbers of observations for income ( $n = 367$ ) and expenditures ( $n = 375$ ).

Bankruptcy filings may also contain errors and intentional omissions made by filers themselves. Many of these errors or omissions will be addressed during the bankruptcy case, but those corrections may not be reflected in our data. These filer errors or omissions can lead to slight discrepancies in observations counts reported throughout the report. For example, 20 presumed white debtors claimed an exemption in retirement accounts, but only 18 reporting owning a retirement account at the start of their bankruptcy case. Plainly, a debtor may not exempt property they don't own. This suggests that at least two presumed white debtors failed to note the value of their retirement accounts on their schedules. Given our limited sample size, we do not drop observations with inconsistent answer patterns (e.g., a retirement account exemption without a corresponding assertion of owning that asset). Instead, we indicate via footnote whenever an apparent data discrepancy arises because of presumed filer error.

### 6.3 PROXY FOR RACE

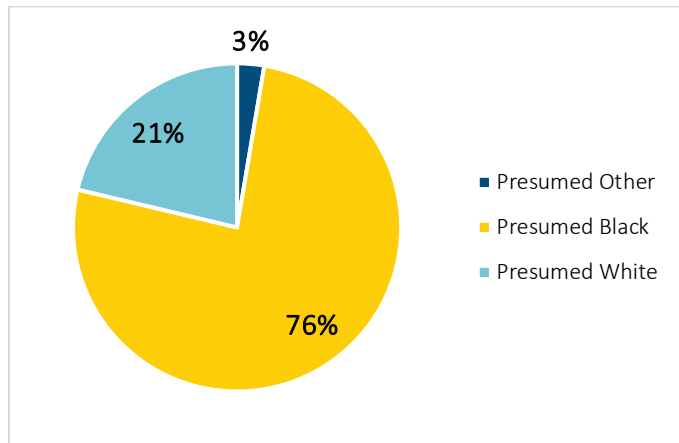
Bankruptcy filings do not report race. We, therefore, use the accepted Bayesian Improved Surname Geocoding (BISG) method, a statistical technique used to create a proxy measure of race. Analysis was conducted using a 50% threshold, meaning that an observation was assigned a proxy race or ethnicity if the BISG method predicted there was a 50% chance of this being the debtor's actual race or ethnicity. We also used a 70% threshold for robustness checks and reported this where relevant. Given the limited number of filings used to construct the dataset, we lack the statistical power to use the 90% threshold as a robustness check as some other researchers have done.<sup>89</sup> The 90% threshold would narrow the observations to only 40% of the original dataset. Using the BISG approach, 42 observations could not be retained for analyses, as the probability of being identified with any given race or ethnicity category was below the 50% threshold (see Figure 1).

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<sup>88</sup> In *Cracking the Code: An Empirical Analysis of Bankruptcy Success*, authors Sara Sternberg Greene, Parina Patel & Katherine Porter treat zeroes as actual numbers and not as missing values because "some debtors simply did not owe any debts of a certain type. See 101 Minn. L. Rev. 1031, 1049 (2017). By analogy, some debtors simply do not own certain types of assets (and cannot, therefore, exempt those assets either).

<sup>89</sup> Sumit Agarwal, Souphala Chomsisengphet, Robert McMenamin & Paige Marta Skiba, Dismissal with Prejudice? Race and Politics in Personal Bankruptcy, 5th Annual Conference on Empirical Legal Studies Paper (2012), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1633083](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1633083) at 9.

**Figure 1**  
**PROXY RACE USING BISG AT THE 50% THRESHOLD**



Using the 50% threshold, roughly 76% of debtors are presumed Black, 21% are presumed white and fewer than 3% are presumed other.<sup>90</sup> Proxy race estimates for the full sample of chapter 7 and 13 filers can be found in Table 1. Our analyses focuses on presumed Black and white filers, given the small number of debtors in the “other” category. Estimates from the 2011 American Community Survey (one-year) indicate that 35% of D.C. residents are (non-Hispanic) white and 49% are (non-Hispanic) Black. Using the 50% thresholds, presumed white filers are underrepresented and presumed Black filers overrepresented relative to the D.C. population. This aligns with findings of other researchers that Black debtors are overrepresented relative to their share of the population, though our finding is not as pronounced as the results reported by Professors Foohey, Lawless and Thorne, which was that Black filers “file bankruptcy at more than twice the rate they appear in the general population.”<sup>91</sup>

Using the 50% thresholds, presumed Black debtor profiles look similar to presumed white debtors across several key variables. Eighty-five percent of presumed Black debtors report consulting with an attorney compared to 90% of presumed white debtors, and 12% of both groups of debtors reported filing jointly with a partner or spouse. Twelve percent of presumed Black filers report a prior bankruptcy case compared to 9% of presumed white filers.

**Table 1**  
**PROXY RACE ESTIMATES USING BISG**

Presumed Race or Ethnicity	50% Threshold	70% Threshold
Native American or Alaskan Native	0	0
Asian or Pacific Islander	3	3
Black	343	283
Hispanic or Latino	9	3
White	96	57
<b>Total</b>	<b>451</b>	<b>346</b>

<sup>90</sup> The “other” category includes Asian or Pacific Islander, Native American, Alaskan Native and Hispanic/Latino.

<sup>91</sup> Pamela Foohey, Robert M. Lawless & Deborah Thorne, Portraits of Bankruptcy Filers, 56 Ga. L. Rev., Forthcoming 2021, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3807592](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3807592) (“Black households file bankruptcy at more than twice the rate they appear in the general population.”).

## 6.4 DESCRIBING THE DATA BY RACE

As noted earlier, our sample of petitions includes 501 total observations. For analysis, we narrowed our focus to those debtors (1) who claimed only consumer debts, (2) whose imputed race was Black or white using the 50% probability threshold, and (3) who claimed some amount of exempt assets. Once narrowing the dataset to meet these requirements, our analytic sample includes 401 observations, of which 328 are presumed Black, and 73 are presumed white.

Research has shown that the demographic profile of bankruptcy filers tends not to match the demographics of their region of residence.<sup>92</sup> Using a regional proxy for race, in 2017 ProPublica asserted that consumer bankruptcy filings were higher in the majority Black zip codes compared to the majority white zip codes.<sup>93</sup> Throughout the U.S., the rate of bankruptcy filings is higher among Black individuals than white.<sup>94</sup> So, although in 2011 the District of Columbia was roughly 50% Black and 40% white, we would not expect bankruptcy proportions to map closely to the district's demographics.<sup>95</sup>

We first compared debtors presumed to be Black and white across various descriptive variables.<sup>96</sup> Next, we used a *t*-test assuming unequal variances to determine the statistical significance of the differences between presumed Black and white debtors in the mean values of the 19 variables in the data. *t*-tests assume unequal variances by utilizing the Welch approximation when calculating differences of means.<sup>97</sup> This approach is appropriate when normal distribution expectations are not met, as is the case for some variables. Given the interest in the direction of the difference, we use a one-tailed *t*-test. Test results are reported in Table A2 of Appendix A. The remainder of this section will highlight a few select variables.

Debtors presumed Black reported an average monthly income of \$3,214, which was less than presumed white filers' average monthly income of \$3,939. As reported in Table A2 of Appendix A, there is a statistically significant difference in the incomes of presumed Black and white debtors ( $p < 0.05$ ).

To assess whether income differences are concentrated among a subset of filers, analysis on filers by presumed race (Black compared to white) was performed for debtors across various income groupings:

- Above and below the D.C. poverty line
- Above and below the D.C. median income and
- Using three groupings using national average income.<sup>98</sup>

<sup>92</sup> Aisha Al-Muslim, *Black People More Likely to File for More Expensive Bankruptcy Option, Experts Say*, WSJ Pro. Bankruptcy (Nov. 2020). Higher costs and less relief loom large as Black debtors are often steered toward more expensive bankruptcy option, studies show. <https://www.wsj.com/articles/black-people-more-likely-to-file-for-more-expensive-bankruptcy-option-experts-say-11605227346>; E. Morrison, B. Pang & A. Uettwiller, *Race and Bankruptcy: Explaining Racial Disparities in Consumer Bankruptcy*. Columbia Law School (2018) [https://scholarship.law.columbia.edu/faculty\\_scholarship/2405](https://scholarship.law.columbia.edu/faculty_scholarship/2405).

<sup>93</sup> Paul Kiel and Hannah Fresques, *Data Analysis: Bankruptcy and Race in America* (2017), ProPublica, <https://projects.propublica.org/graphics/bankruptcy-data-analysis#Explain>.

<sup>94</sup> Pamela Foohey, Robert M. Lawless & Deborah Thorne, *Portraits of Bankruptcy Filers*, 56 Ga. L. Rev., n.38, Forthcoming 2021, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3807592](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3807592) ("Most notably, Black households are significantly over-represented in the consumer bankruptcy system relative to their share of the population. Thirteen percent of the population identifies as Black or African American. Black households file bankruptcy at more than twice the rate of their incidence in the population.").

<sup>95</sup> Census Bureau American Community Survey, <https://data.census.gov/cedsci/table?q=United%20States&t=Race%20and%20Ethnicity&g=0400000US11&y=2011&tid=ACSDT1Y2011.B02001>.

<sup>96</sup> Not all filers reported information for all categories. When data are missing, we do not assume zero; means are calculated using available data. Zeros are used only if they were recorded on the bankruptcy file.

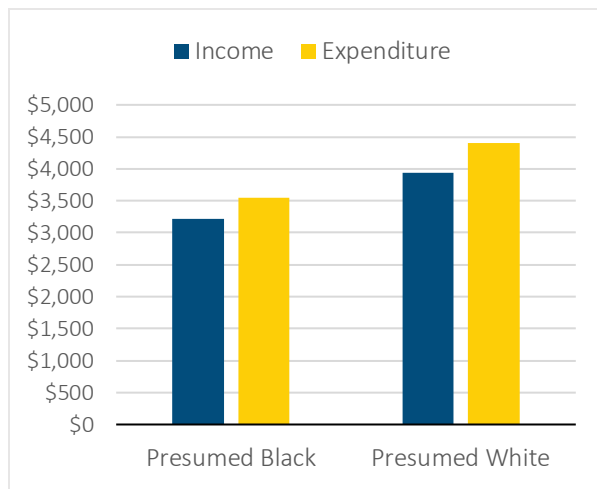
<sup>97</sup> The sample size for each group analysis is often larger than 20 observations, thus we do not use the Mann-Whitney *U* test but rather allow the variances to vary within a *t*-test.

<sup>98</sup> Using data on national average income from Pew Research (<https://www.pewresearch.org/social-trends/2012/08/22/the-lost-decade-of-the-middle-class/>), we identified below middle income, middle income and above middle income. When stratifying our filers into the three income categories by presumed race (Black and white) we observe no significant difference in income reported by presumed race. For this analysis, we estimated family size at four persons. See *infra* note 85.

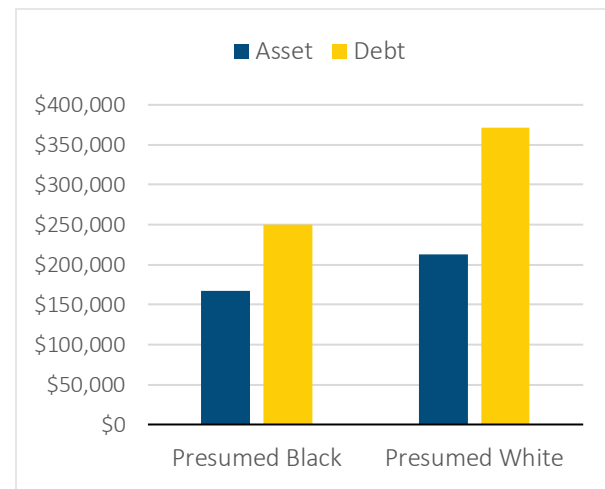
In each instance, no statistically significant difference in mean income is observed within group when comparing debtors presumed to be Black relative to debtors presumed to be white.

When examining a few other characteristics of filers, a statistically significant difference is observed in average reported monthly expenditures ( $p < 0.05$ ) and average outstanding debts ( $p < 0.05$ ) among presumed Black and white filers (illustrated in Figures 2a and 2b). For example, filers presumed to be white report \$4,397 in average expenditures monthly, compared with \$3,547 for presumed Black filers, on average a difference of \$850 (\$10,200 annually). Presumed white filers report \$371,746 in debt, compared with \$249,797 for presumed Black filers, a difference of \$121,949.

**Figure 2a**  
AVERAGE INCOME AND EXPENDITURE BY RACE



**Figure 2b**  
AVERAGE ASSET AND DEBT BY RACE



Although we observe a substantial difference in the average reported assets of presumed Black filers and presumed white filers (\$167,236 vs. \$212,994), the difference is not statistically significant ( $p$ -value = 0.12). Lack of significance despite the large difference in mean values is likely due to the large variances in reported asset levels, which lead to more uncertainty in the estimates.

On average, all debtors studied are poverty-adjacent, meaning their income is near, but not below, poverty thresholds. The average filer presumed to be Black makes \$8,700 less in income annually than the average presumed white who filed a chapter 7 or 13 bankruptcy in the District of Columbia in 2011. According to the American Community Survey, the difference in income would equate to more than five months of rent in the district using the average rental rate in 2012.<sup>99</sup>

<sup>99</sup> Analysis of Washington, D.C., data found in Census American Community Survey can be found at <https://www.deptofnumbers.com/rent/district-of-columbia/washington/>.

## Section 7: Analyses of Property and Exemptions

### 7.1 SCHEDULE A: REAL PROPERTY, LAND AND PERSONAL PROPERTY USED AS A RESIDENCE

In Section 7.1 we examine property reported on schedule A, which includes real property, land and personal property used as a residence (e.g., an RV) and burial plots. We also examine whether filers claimed an exemption in this property.<sup>100</sup> The U.S. Census Bureau estimates that the median wealth of homeowners is nearly 90 times more than nonhomeowners.<sup>101</sup> Given the role home ownership plays in wealth building, we aim to offer an analysis of what is happening to individuals who file bankruptcy in the District of Columbia in 2011 who also own a home. Subsection 7.1.1 details homes identified on filers' schedule A. We do not report outstanding debts on the residence. Subsection 7.1.2 details the value (equity) of the homestead debtors seek to exempt in their bankruptcy proceedings.

Fewer than half of all debtors in our sample report property (often homes) in their schedule A filings. Among presumed Black debtors, 46% report owning a home compared with 28% of presumed white debtors. Yet on average, presumed Black filers report 43% lower property value than filers presumed to be white (42% at the median). Presumed white debtors report homes valued at \$487,509 at the mean (median \$431,500), whereas presumed Black debtors report homes valued at \$276,245 (median \$249,000). The difference across these means is statistically significant ( $p < 0.05$ ), as reported in Table A2 of Appendix A.

The estimates are different when considering homestead exemptions, which are reported in schedule C. These exemptions represent the value of home equity that filers expect to retain after bankruptcy. Of the debtors who report a homestead on schedule A, roughly the same proportion of presumed Black and white filers claim some portion of it as an exempt asset on their schedule C (64% of presumed Black and 67% of presumed white debtors). The size of the exemption claimed, however, differs substantially across presumed Black and white filers. On average white debtors claim exemptions valued at \$198,232, whereas presumed Black debtors claim homestead exemptions valued at \$105,523. The difference across these means is statistically significant ( $p < 0.10$ ), as reported in Table A2 of Appendix A. Presumed Black filers, in other words, are expected to leave bankruptcy owning property listed on schedule A (again, often their homes) that is valued at 47% less than filers presumed white. This gap is roughly 4 percentage points greater than the gap in property values reported at the time of the bankruptcy filing.

The average outstanding debt on Washingtonians' homesteads that claim an exemption for that property is \$333,780 for presumed white debtors and \$180,825 for presumed Black debtors. Presumed Black and white debtors exempt 37% of their home value on schedule C.<sup>102</sup> Thus, when analyzing the differences in homestead exemptions of presumed Black and white filers in the District of Columbia in 2011, we do not observe much difference in relative terms, but we do observe a large and statistically significant difference in absolute terms. It is the value in absolute terms that directly impacts the amount of wealth remaining after bankruptcy.

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<sup>100</sup> Schedule A relates to property covered by 11 U.S.C. § 522(d)(1). That section covers "The debtor's aggregate interest ... in real property or personal property that the debtor or a dependent of the debtor uses as a residence, in a cooperative that owns property that the debtor or a dependent of the debtor uses as a residence, or in a burial plot for the debtor or a dependent of the debtor." For the sake of simplicity, we refer to this throughout as real property.

<sup>101</sup> 2017 Data Show Homeowners Nearly 89 Times Wealthier than Renters, <https://www.census.gov/library/stories/2020/11/gaps-in-wealth-of-americans-by-household-type-in-2017.html>.

<sup>102</sup> This calculation uses the homestead value reported and the equity reported given a petitioner claims the homestead value on their schedule C. Of the 18 presumed white debtors who claim a homestead exemption, the average value was \$532,012 (\$333,780 in outstanding debts on the property and \$198,232 in equity). Of the 102 presumed Black debtors who claim a homestead exemption the average value was \$286,348 (\$180,825 in outstanding debts on the property and \$105,523 in equity).

### 7.1.1 HOMESTEAD VALUES AS REPORTED ON SCHEDULE A

Tables 2 and 3 provide mean reported values of debtors' homestead, by racial groups and type of exemption pursued (D.C. versus federal). Each table compares these values along a different axis. Table 2 tests for differences in mean values for homesteads within presumed racial groups, while Table 3 tests across presumed racial groups. For example, estimates from Table 2 answer whether a significant difference exists in reported homestead values among presumed Black debtors who opt for a federal exemption relative to presumed Black debtors who opt for a D.C. exemption. By contrast, estimates for Table 3 examine whether we observe a significant racial difference in reported homestead values among debtors who opted for a federal exemption. For both tables, the level of statistical significance from the relevant *t*-test of difference across means is reported in the last column. The difference in the means is statistically significant when the significance level is greater than 90%.

Overall, the estimates suggest a difference in reported homestead values for those filers who opted for a D.C. exemption compared with those who opted for a federal exemption. The difference in mean property value reported across exemption type is statistically significant for our sample as a whole and for presumed Black debtors but falls slightly short of the significance threshold for presumed white debtors. When comparing filers across presumed race, but within exemption type (D.C. or federal) reported in Table 5, presumed white debtors report higher valued homesteads than presumed Black debtors, and the difference is statistically significant. On average, for debtors who opt to file for a federal exemption, presumed white filers report homesteads valued \$150,744 greater (59% more) than do presumed Black filers. For filers opting for the D.C. exemption, presumed white debtors report homesteads valued at \$232,706 greater (78% more) than do presumed Black debtors.

**Table 2**

#### REPORTED HOMESTEAD (SCHEDULE A), BY EXEMPTION TYPE GIVEN PRESUMED RACE<sup>103</sup>

Presumed Race of Debtors	Federal Exemption		DC Exemption		Difference	Statistical Significance
	Mean Values	Number of Observations	Mean Values	Number of Observations		
All Debtors	\$277,424	86	\$331,740	96	-\$54,316	96.22%
Black Debtors	\$256,390	74	\$297,803	82	-\$41,413	97.25%
White Debtors	\$407,134	12	\$530,509	14	-\$123,375	88.30%

**Table 3**

#### REPORTED HOMESTEAD (SCHEDULE A), BY PRESUMED RACE GIVEN EXEMPTION TYPE<sup>104</sup>

Exemption Type	Presumed Black		Presumed White		Difference	Statistical Significance
	Mean Values	Number of Observations	Mean Values	Number of Observations		
All Exemptions	\$276,245	159	\$487,509	27	-\$211,264	99.97%
Federal Exemption	\$256,390	74	\$407,134	12	-\$150,744	98.56%
DC Exemption	\$297,803	82	\$530,509	14	-\$232,706	99.23%

<sup>103</sup> The number of presumed Black and white filers who claimed a homestead in their petition was 159 and 27 (Table 3), but the total number who opted for a federal or D.C. exemption was 156 and 26 (Table 2).

<sup>104</sup> The number of presumed Black and white filers who claimed a homestead in their petition was 159 and 27 (Table 3), but the total number who opted for a federal or D.C. exemption was 156 and 26 (Table 2).

### 7.1.2 HOMESTEAD EXEMPTIONS CLAIMED ON SCHEDULE C

In this section, we explore the relationship between homestead exemptions, exemption type and the presumed race of the debtor.

As reported in Section 7.1.1, presumed white debtors enter bankruptcy reporting higher mean homestead values. In the District of Columbia, debtors may choose to use the generally applicable federal exemptions or the district-specific exemptions. The federal exemptions limit a debtor to retaining a maximum of \$20,000 in their homestead, but the District of Columbia has no maximum homestead exemption.<sup>105</sup> In Tables 4 and 5 we report what debtors include on their petitions; in some instances the reported homestead exemption appears to exceed the maximum permissible exemption. We do not alter the reported values or set a maximum to ensure we are accurately describing the data collected, which can include filing errors.<sup>106</sup>

Our data show that presumed white debtors claim larger homestead exemptions than presumed Black filers (on average \$198,232 for presumed whites vs. \$105,523 for presumed Blacks). Given the D.C. unlimited homestead exemption, one might expect that debtors who claim the D.C. exemption would claim greater homestead exemptions than debtors who claim the federal exemption.

Table 4 examines whether claimed homestead exemptions *within racial groups* differ depending on the whether the federal or D.C. exemption is used. In addition to simply comparing mean exemption values, we report whether the differences in mean claimed exemption across type are statistically significant. Across presumed Black filers, those who choose a D.C. exemption retain a homestead valued 2.6 times greater than the homestead of those who choose federal exemptions. By contrast, presumed whites filing D.C. exemptions retain 3.1 times the homestead value of presumed whites filing federal exemptions, a greater difference than that for presumed Black filers.

**Table 4**

#### CLAIMED HOMESTEAD EXEMPTIONS BY EXEMPTION TYPE GIVEN PRESUMED RACE

Presumed Race of Debtors	Federal Exemption		DC Exemption		Difference	Statistical Significance
	Mean Values	Number of Observations	Mean Values	Number of Observations		
All Debtors	\$60,316	50	\$164,804	69	-\$104,488	99.99%
Black Debtors	\$54,535	42	\$143,383	59	-\$88,848	99.96%
White Debtors	\$90,668	8	\$284,284	10	-\$193,616	97.03%

Whereas Table 4 examines if a significant difference exists within racial groups depending on the exemption pursued, Table 5 examines whether exemption values *within an exemption type* (federal versus D.C.) differ depending on the filers' presumed race. Although both presumed Black and white debtors who opted for the D.C.

<sup>105</sup> For ease of understanding, we refer to a debtor retaining their home equity. However, the homestead exemption is broader than that. Debtors may retain their "aggregate interest ... in real property or personal property that the debtor or a dependent of the debtor uses as a residence, in a cooperative that owns property that the debtor or a dependent of the debtor uses as a residence, or in a burial plot for the debtor or a dependent of the debtor." See 11 U.S.C. § 522(d)(1). The D.C. exemption is similar. See 15-501(a)(14) (allowing an exemption in the "debtor's aggregate interest in real property used as the residence of the debtor, or property that the debtor or a dependent of the debtor in a cooperative that owns property that the debtor or a dependent of the debtor uses as a residence, or in a burial plot for the debtor or dependent of the debtor, except nothing relative to these exemptions shall impair the following debt instruments on real property: deed of trust, mortgage, mechanic's lien, or tax lien").

<sup>106</sup> For example, in Table 4 presumed white debtors who opt for a federal exemption on average report a home value net debts of \$90,668, yet the federal limit for a single filer on their homestead exemption is generally \$20,000. Although joint filers can stack their exemptions and claim \$40,000, our data still exceed that amount. Sometimes it appears that debtors asserted the D.C. exemptions but checked the box to indicate that they were asserting the federal exemptions. Other debtors appear to be asserting an exemption in property that is jointly held with another person, such as a tenancy by the entirety. Whether the court ultimately validated this claimed exemption is not contained in our dataset. Thus, we report only the data reported by the debtors themselves. With a larger dataset, we might exclude some of these observations. But, given the small size of our data, we do not exclude observations because of possible inaccuracies with the debtors' reporting.

exemption report greater homestead values, the difference between the average retained value for presumed white and Black debtors grows from \$36,133 for those claiming the federal exemption to \$140,901 for those claiming the D.C. exemption. When claiming the D.C. exemption, presumed white debtors retain on average nearly double the value of homesteads of presumed Black debtors. When claiming the federal exemption, presumed white debtors retain on average 66% more homestead value than presumed Black debtors.

**Table 5**

**CLAIMED HOMESTEAD EXEMPTIONS, BY PRESUMED RACE GIVEN EXEMPTION TYPE**

	Presumed Black		Presumed White		Difference	Statistical Significance
	Mean Values	Number of Observations	Mean Values	Number of Observations		
All Exemptions	\$105,523	101	\$198,232	18	-\$92,709	94.34%
Federal Exemption	\$54,535	42	\$90,668	8	-\$36,133	77.20%
DC Exemption	\$143,383	59	\$284,284	10	-\$140,901	93.47%

Overall, then, these estimates indicate the following:

1. A greater proportion of presumed Black debtors report owning a home than presumed white debtors (46% compared to 28%) in our sample, but average property values among homeowners are considerably higher for presumed whites (\$431,500 at the median) than presumed Blacks (\$249,000 at the median).
2. Similar proportions of presumed Black and white homeowners claim a real property exemption (roughly two-thirds), but the average claimed exemption value is roughly twice as high for presumed white (\$198,232) relative to presumed Black (\$105,523) debtors.
3. As a result, presumed Black debtors are expected to leave bankruptcy with real property asset values that represent 53% of those of presumed white debtors, even though presumed Black debtors entered bankruptcy with real property valued at roughly 57% that of presumed white debtors.

## 7.2 PERSONAL PROPERTY

### 7.2.1 PERSONAL PROPERTY VALUES AS REPORTED ON SCHEDULE B

In addition to homesteads, debtors identify any personal property they own when filing a bankruptcy petition. For example, this includes but is not limited to jewelry, clothing, cash, retirement accounts and livestock. Although not all petitioners own a homestead, every petitioner in the dataset claims at least some dollar amount greater than zero on their schedule B. Although estimates for the difference of means in Table A2 of Appendix A is provided for some categories, the limited number of observations it statically inappropriate to perform a *t*-test for all variables captured in schedule B. Thus, in Section 7.2 we generally focus on differences at the median instead of at the mean unless there are a sufficient number of observations to perform a *t*-test.

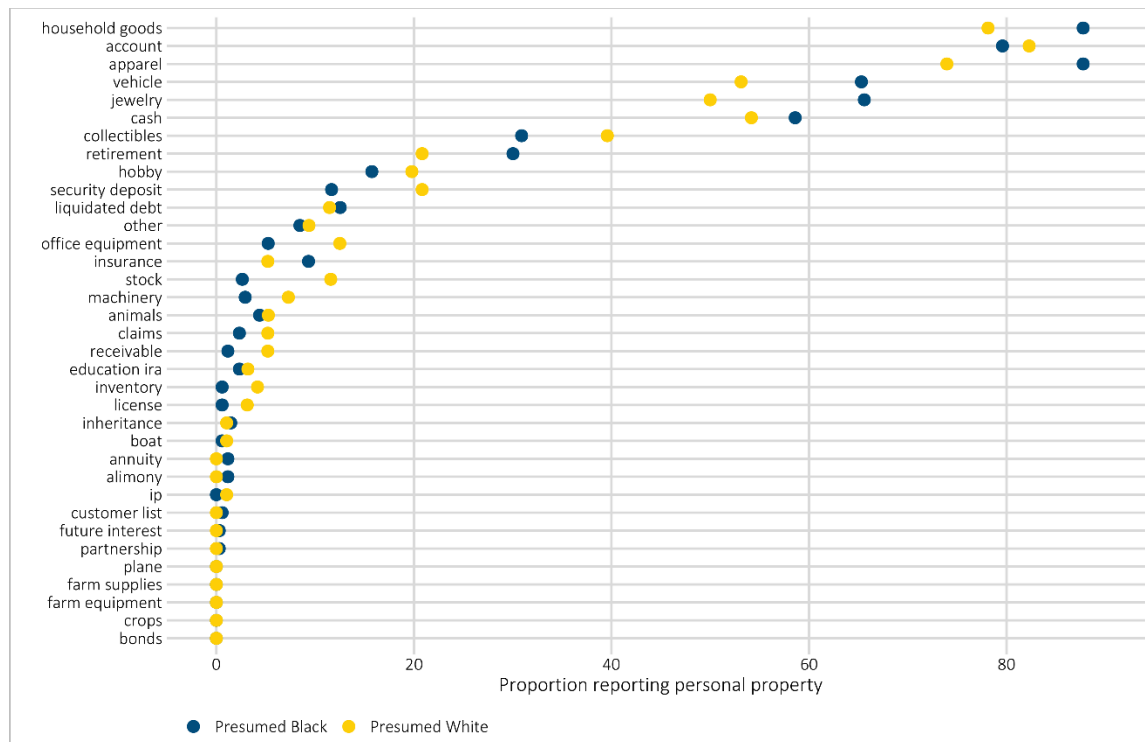
Each debtor in the sample lists all their personal property on schedule B as of the date they filed bankruptcy. At the median, presumed Black and white filers report similar levels of personal property, with presumed Black filers reporting \$10,365 of total personal property and presumed white filers reporting \$9,595. This is itself a surprising finding because white families are more likely to own a wide array of personal property and to own personal property that is more valuable than Black families.<sup>107</sup>

<sup>107</sup> See *supra*, notes 19–24.



In bankruptcy, a debtor’s personal property is reported in 35 individual categories (see Table A1 in Appendix A for detailed definitions of each category). Understanding the distribution of filers’ personal property across the categories is important, because different exemptions rules apply for each type of property. Differences in the kind and amount of property owned at the time of a bankruptcy filing relate to how much property a debtor can exempt. Figure 3 provides information on the types of personal property filers tend to claim and is broken down by presumed race. The figure shows the proportion of filers who report any amount of a given personal property category for presumed Black and white filers.

**Figure 3**  
**ESTIMATED PROPORTION OF FILERS REPORTING ANY PERSONAL PROPERTY BY TYPE AND PRESUMED RACE**



Note: Categories of personal property are further described in Table A1 in Appendix A.

Figure 3 suggests the following conclusions. First, the most frequently reported types of personal property are household goods (which includes electronics); checking, savings and other financial accounts; clothing; vehicles; jewelry; and cash. Over half of filers report ownership of each of these categories individually. Next in frequency are retirement accounts (IRA, employer-based, Keogh and others) and collectibles (e.g., antiques, stamps and art), which are reported by slightly more than a quarter of filers. All other types of property are reported by fewer than a quarter of filers. The figure also indicates that for the most frequently reported categories—those reported by at least a quarter of filers—presumed Black filers tend to be more likely than presumed white filers to report a given property type. Cash, checking and other accounts as well as cash on hand are exceptions, with presumed Black and white filers reporting property ownership at similar rates. For less prevalent property categories—those that are held by fewer than a quarter of filers—the opposite pattern tends to hold, with presumed white filers being slightly more likely to report those property types.

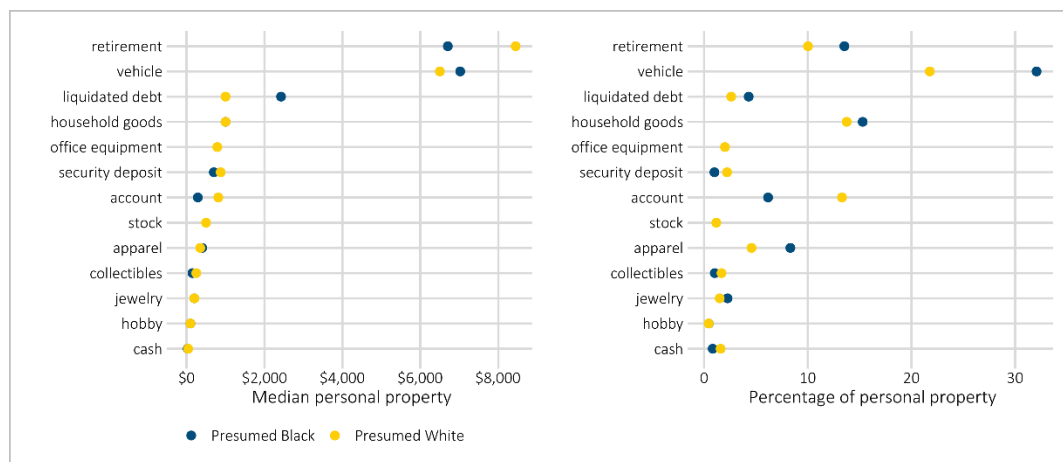
Singling out insurance, 8% of bankruptcy filers in our data report an insurance policy as an asset. The proportion is slightly higher for presumed Black filers relative to presumed white filers, at 9% and 5%, respectively.

Figure 4 provides information on claimed property value among filers. The left panel provides median property values for those reporting nonzero levels of that property type. The right panel provides the average share of filers' total property value that the property type represents. Total property values were obtained by summing all individually reported property categories on schedule B. For example, an estimate of 30 for household goods would indicate that, on average, household goods make up 30% of all personal property value filers brought into bankruptcy with them. The sample for the right panel is all filers. For both panels, only categories of property for which at least 10% of filers report owning the property type are shown.

Figure 4 suggests that, by value, vehicles and retirement account are the most important type of personal property filers report. Vehicles also make up the largest average share of total property reported, for both presumed Black and white filers. For all other types of goods, median reported values tend to be low (typically under \$1,000). Property values are similar for presumed Black and white filers across all property types, except for retirement accounts, where presumed white filers hold roughly \$1,700 more in value than presumed Black filers at the median (\$8,440 for presumed whites compared with \$6,700 for presumed Blacks, roughly 25% more). With the exception of vehicles, retirement accounts, household goods, checking or cashing accounts and apparel, most property types also make up a small share of total reported personal property values (less than 5% each). Trends across presumed Black and white filers indicate that more of presumed Black filers' property is held as vehicles (22% for presumed whites, 32% for presumed Blacks) and, to a lesser extent, as retirement accounts (10% for presumed whites, 14% for presumed Blacks) and apparel (5% for presumed whites, 8% for presumed Blacks).

Given the small proportion of filers reporting interest in insurance policies, estimates for insurance value are not provided in Figure 4. At the median, filers who report an interest in an insurance policy report \$455 in insurance policy value. Presumed white filers report higher insurance policy values than presumed Black filers (\$526 relative to \$415). When comparing across all filers, insurance policies represent fewer than 2% of all property value claimed by D.C. bankruptcy filers on average. The proportion is similar across presumed Black and white filers (2% compared with 1%).

**Figure 4**  
**ESTIMATED MEDIAN PROPERTY VALUES (LEFT) AND ESTIMATED SHARE OF TOTAL REPORTED PERSONAL PROPERTY (RIGHT) BY TYPE AND PRESUMED RACE**



Note: Categories of personal property are further described in Table A1 in Appendix A.

Overall, then, these estimates indicate the following:

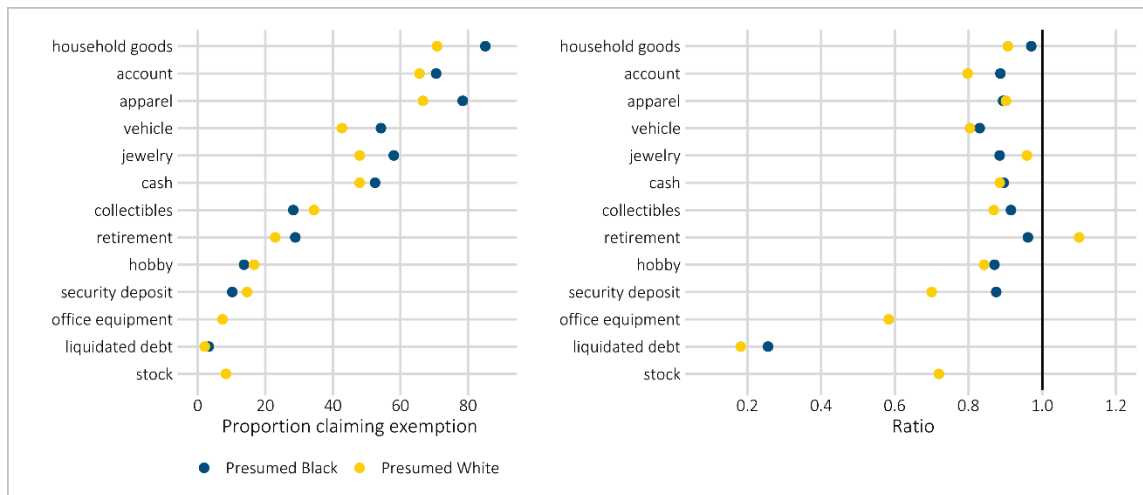
1. Vehicles and retirement assets are the most frequently reported types of personal property that Washingtonians own when they file for bankruptcy. A relatively large portion of filers hold these types of property (64% of filers report vehicle assets and 28% report retirement assets). Among filers who have them, median asset levels for these property types are relatively high (\$6,710 in vehicle assets and \$6,700 in retirement assets), especially when compared with other types of property.
2. Presumed white filers have higher median retirement asset levels than presumed Black filers (roughly 25% more), but reported vehicle values are similar. One-tailed *t*-tests of statistical significance assuming unequal variance indicate that mean property values are significantly different across presumed Black and white filers for retirement accounts ( $p < 0.10$ ), financial accounts ( $p < 0.05$ ) and apparel ( $p < 0.05$ ), but not vehicles or household goods.
3. The proportion of filers who hold property as household goods, financial accounts and apparel is large (more than 80% for each category). Yet these constitute a relatively low proportion of total personal property reported for the average filer (household goods represent 15% of all property claimed, accounts are 8% and apparel is 7%). The median property value for each category is also relatively small (\$1,000 for household goods, \$400 each for accounts and apparel).
4. Insurance products constitute a negligible portion of the property value filers bring into bankruptcy proceedings.

### 7.2.2 PERSONAL PROPERTY EXEMPTIONS CLAIMED ON SCHEDULE C

Filers can typically keep only a portion of their total property after going through a bankruptcy proceeding. The remainder is used to repay their creditors. Schedule C is where filers claim the property they intend to exempt (i.e., keep). At the median, presumed Black filers in the District of Columbia claimed \$7,850 in exemptions, relative to \$7,310 for presumed white filers. The median ratio of value of declared property to value of claimed exemptions is 1.0 for both presumed Black and white filers, meaning that at the median presumed Black and white filers both claim 100% of their property as exempt. What proportion of reported value filers can keep varies by type of property, by filing status, and by the exemption regime claimed (federal versus D.C.).

The left panel of Figure 5 shows what proportion of filers claim exemptions for each of the allowable categories of personal property, focusing again on those categories where at least 10% of filers claim property. The trends in exemption claims are similar to those in reported property: ranking types of property by proportion of filers claiming an exemption yields the same order as ranking them by proportion of filer reporting the property in the first place. For most property types, the proportion of filers claiming exemptions is slightly lower than the proportion claiming property, which indicates that not all filers claim exemptions for the property they report. For most categories, presumed Black filers are either slightly more likely than or as likely as presumed white filers to claim an exemption.

**Figure 5**  
**ESTIMATED PROPORTION OF FILERS CLAIMING EXEMPTION (LEFT) AND ESTIMATED RATIO OF EXEMPTION CLAIMS TO PROPERTY CLAIMS (RIGHT) BY TYPE AND PRESUMED RACE**



Note: Categories of personal property are further described in Table A1 in Appendix A.

The right panel of Figure 5 provides the ratio of the proportion of filers claiming an exemption to the proportion of filers claiming property for each property type. For example, an estimate of 0.8 for a given property type indicates that 80% of petitioners who reported nonzero property value for this type of property also claimed an exemption. Focusing on the key property categories highlighted in previous figures, the estimates suggest that roughly 85% of filers reporting a vehicle claimed vehicle exemptions. This is true for both presumed Black and white filers. Nearly all presumed Black filers who report retirement accounts also claim an exemption for it, and, surprisingly, more presumed white filers claim a retirement exemption than report retirement accounts (20 presumed white filers claim any retirement assets, but 22 claim a nonzero exemption: a ratio of 1.1). This indicates that a small proportion of filers listed an exemption for a retirement account whose value they did not report directly in schedule B.<sup>108</sup> Roughly 90% or more of filers claim an exemption for household goods and apparel. For financial accounts, however, 80% of white filers claim an exemption compared to 90% of presumed Black filers.

Again, because of the small proportion of filers reporting insurance policies among their assets, estimates for insurance exemption claims are not shown in the figure. Overall, 8% of presumed Black filers and 5% of presumed white filers claim an exemption for insurance policies. This represents 90% of presumed Black filers who reported insurance property on schedule B and 100% of presumed white filers.

The first panel of Figure 5 provides median exemption values claimed by filers with nonzero exemption claims, again focusing on the most frequently claimed property types. Exemptions claimed are relatively small—under \$2,500—for all but two property types: vehicles and retirement accounts. Median claimed exemptions for vehicles are lower for presumed Black than for presumed white filers, at \$2,575 and \$3,150, respectively, despite median vehicle values being higher for presumed Black filers (as shown in Figure 4 and Table 6).

<sup>108</sup> It is not actually possible to claim an exemption in property that you do not report having, and so the maximum ratio should be one. This likely represents a problem with the use of self-reported data. This was likely resolved by the parties in the actual cases without filing amended schedule B's, or those amended schedules are not in the dataset provided to us.

**Table 6**  
**ESTIMATED MEDIAN VEHICLE VALUE AND MEDIAN EXEMPTION**

	Presumed Black	Presumed White	Presumed Black-White Gap	Presumed Black-White Ratio
Assets Reported	\$7,022	\$6,500	\$522	1.08
Exemptions Claimed	\$2,575	\$3,150	-\$570	0.82

Exemptions claimed for retirement accounts are larger and substantially more unequal. As reported in Table 7, presumed Black filers claim roughly \$6,500 in exemptions at the median for retirement accounts, compared with roughly \$13,500 for presumed white filers—nearly double presumed Black filers’ claimed amount. Whereas presumed white filers report higher retirement account values than presumed Black filers, the racial gap between median exemptions is larger than the gap between median values (\$7,000 relative to \$1,700).

**Table 7**  
**ESTIMATED MEDIAN RETIREMENT ACCOUNT VALUES AND MEDIAN EXEMPTION**

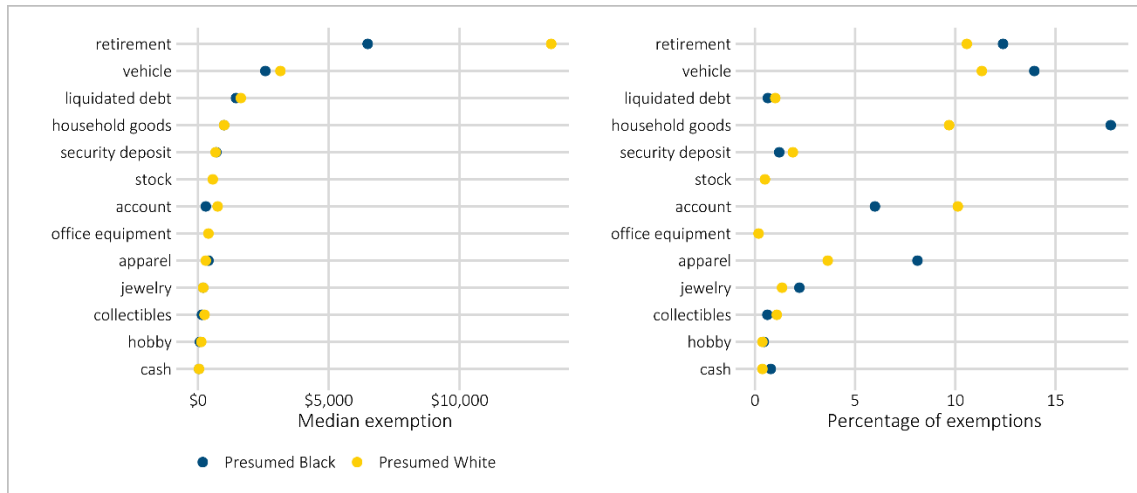
	Presumed Black	Presumed White	Presumed Black-White Gap	Presumed Black-White Ratio
Assets Reported	\$6,704	\$8,445	-\$1,741	0.79
Exemptions Claimed	\$6,485	\$13,500	-\$7,015	0.48

The second panel of Figure 6 shows the average proportion that each type of exemption represents (out of total exemptions claimed) for filers. Total exemptions were obtained by summing all individually reported exemptions on schedule C. Overall, the figure suggests that most exemptions by value pertain to vehicles and retirement accounts, followed by exemptions for household goods, financial accounts and apparel. There tend to be substantial racial differences in exemption shares across these last three categories, with presumed Black filers holding more of their exemptions in apparels and household goods and presumed white filers holding more of their exemptions in nonretirement accounts. For presumed Black filers, household goods make up on average 18% of all claimed property exemptions by value, compared to 10% for presumed white filers. For apparel, the corresponding estimates are 8% (presumed Black) and 4% (presumed white). For nonretirement accounts, the estimates are 6% (presumed Black) and 10% (presumed white).

Insurance exemptions are not shown in the figure because fewer than 10% of filers claim them. At the median, presumed Black filers claim \$330 in insurance exemptions, relative to only \$10 for presumed white filers, which suggest presumed Black filers retain a greater portion of insurance value relative to presumed white filers. For both presumed Black and white filers, however, insurance makes up on average only about 1% of total claimed exemptions. This suggests that insurance plays a relatively minor role in the consumer bankruptcy process.

Figure 6

ESTIMATED MEDIAN EXEMPTIONS (LEFT) AND ESTIMATED SHARE OF TOTAL REPORTED EXEMPTIONS (RIGHT) BY TYPE AND PRESUMED RACE



Note: Categories of personal property are further described in Table A1 in Appendix A.

Overall, estimates of exemptions suggest the following:

1. Presumed Black and white filers claim similar total exemption values at the median.
2. Retirement accounts and, to a lesser extent, vehicle exemptions make up a large portion of retained property value for filers (54% and 29% of filers claim vehicle and retirement account exemptions, respectively, with claim values of \$2,725 and \$8,280, respectively, at the median).
3. Exemptions claimed show racial differences for retirement accounts, checking and savings accounts, and apparel. Racial differences are greatest at the median for retirement accounts (\$6,485 for presumed Black filers compared to \$13,500 for presumed white filers).
4. Exemptions for vehicles and household goods exhibit no racial differences.
5. Insurance products constitute a negligible portion of the exemption value filers claims in bankruptcy petitions.

## Section 8: Conclusion

This report is the first to sort bankruptcy filings by imputed race using surname and zip code to study the differences in the assets that debtors bring into and retain after bankruptcy.

We find that presumed Black bankruptcy filers are more likely to report owning real property (often homes) than presumed white filers, which makes our sample different from studies of homeownership rates in the District of Columbia (and nationwide). But we find notable differences between the value of homesteads owned by presumed Black and white bankruptcy filers at the time of their bankruptcy filing. The mean homestead value of presumed Black bankruptcy filers in our sample is \$276,245, and the mean homestead value of presumed white bankruptcy filers is \$487,509, a difference of \$211,264.<sup>109</sup> We also find that filers who claim the D.C. bankruptcy exemptions, which allows a filer to keep all of their home equity, report \$80,047 greater homestead values than filers that claim the federal exemptions, which do not allow a filer to keep all of their home equity.<sup>110</sup> That aggregate number masks, however, the relative disparity between presumed Black and white filers. Presumed Black bankruptcy filers claiming the more generous D.C. homestead exemption report home values that are \$41,413 higher, but presumed white bankruptcy filers report homestead that are \$123,375 higher.<sup>111</sup>

We also find notable differences between the claimed homestead exemptions of presumed Black and white bankruptcy filers. Presumed Black filers exempt \$54,535 in homestead value when using the federal exemptions and \$143,383 when using the D.C. exemptions (a \$88,848 difference).<sup>112</sup> By contrast, presumed white filers exempt \$90,668 when using the federal exemptions and \$284,284 when using the D.C. exemptions (a \$193,616 difference).<sup>113</sup> As a result, facially neutral bankruptcy laws allowing filers, whether Black or white, to exempt homesteads facilitates presumed white filers leaving bankruptcy with more wealth than presumed Black filers.

Regarding personal property, we find that presumed Black and white bankruptcy filers exempt an approximately equal amount of personal property, with presumed Black filers claiming slightly more property as exempt. This was surprising because we expected that presumed Black bankruptcy filers would own fewer assets because of the well-documented wealth gap between Black and white people outside of bankruptcy. There were some notable differences, however. Presumed white bankruptcy filers exempted approximately 25% more retirement assets than presumed Black filers, and vehicles represented a larger percentage of presumed Black bankruptcy filers' total exempt assets (about 30%) than of presumed white filers (about 20%). Another notable result related to vehicles is that presumed Black bankruptcy filers report higher vehicle asset values going into bankruptcy but exempt fewer vehicle-related assets when they leave bankruptcy.<sup>114</sup> As a result, facially neutral bankruptcy laws allowing filers, whether Black or white, to exempt certain personal property facilitates presumed white filers leaving bankruptcy with more wealth than presumed Black filers.

Our ability to generalize from our data to the rest of the country is limited, in part, by our small sample size. In future work, we hope to obtain a larger sample to see if our results hold over time and in other jurisdictions.

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<sup>109</sup> See *supra* Table 3.

<sup>110</sup> See *supra* Table 2.

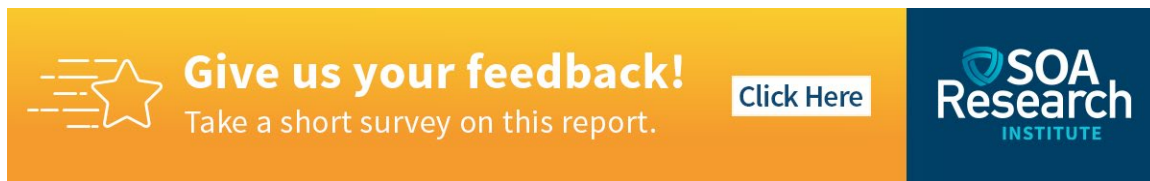
<sup>111</sup> See *supra* Table 2.


<sup>112</sup> See *supra* Table 4.

<sup>113</sup> See *supra* Table 4.


<sup>114</sup> Presumably because they own cars that are more likely to be subject to a lien.

## Section 9: Feedback



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## Section 10: Acknowledgments

The researchers' deepest gratitude goes to those without whose efforts this project could not have come to fruition: the Project Oversight Group and others for their diligent work overseeing questionnaire development, analyzing and discussing respondent answers, and reviewing and editing this report for accuracy and relevance.

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## Appendix A: Additional Tables

**Table A1**

### TYPES OF PERSONAL PROPERTY REPORTED

Type of Personal Property as Described in Schedule B	Label Used in Figures
Cash on hand.	cash
Checking, savings or other financial accounts, certificates of deposit, or shares in banks, savings and loan, thrift, building and loan, and homestead associations, or credit unions, brokerage houses, or cooperatives.	account
Security deposits with public utilities, telephone companies, landlords, and others.	security deposit
Household goods and furnishings, including audio, video, and computer equipment.	household goods
Books, pictures and other art objects, antiques, stamp, coin, record, tape, compact disc, and other collections or collectibles.	collectibles
Wearing apparel.	apparel
Furs and jewelry.	jewelry
Firearms and sports, photographic, and other hobby equipment.	hobby
Interests in insurance policies. Name insurance company of each policy and itemize surrender or refund value of each.	insurance
Annuities.	annuity
Interests in an education IRA as defined in 26 U.S.C. § 530(b)(1) or under a qualified State tuition plan as defined in 26 U.S.C. § 529(b)(1). Give particulars. (File separately the record(s) of any such interest(s). 11 U.S.C. § 521(c).)	education ira
Interests in IRA, ERISA, Keogh, or other pension or profit-sharing plans. Give particulars.	retirement
Stock and interests in incorporated and unincorporated businesses.	stock
Interests in partnerships or joint ventures. Itemize.	partnership
Government and corporate bonds and other negotiable and nonnegotiable instruments.	bonds
Accounts receivable.	receivable
Alimony, maintenance, support, and property settlements to which the debtor is or may be entitled. Give particulars.	alimony
Other liquidated debts owed to debtor including tax refunds. Give particulars.	liquidated debt
Equitable or future interests, life estates, and rights or powers exercisable for the benefit of the debtor other than those listed in Schedule A—Real Property.	future interest
Contingent and noncontingent interests in estate of a decedent, death benefit plan, life insurance policy, or trust.	inheritance
Other contingent and unliquidated claims of every nature, including tax refunds, counterclaims of the debtor, and rights to setoff claims. Give estimated value of each.	claims
Patents, copyrights, and other intellectual property. Give particulars.	ip
Licenses, franchises, and other general intangibles. Give particulars.	license
Customer lists or other compilations containing personally identifiable information (as defined in 11 U.S.C. § 101(41A)) provided to the debtor by individuals in connection with obtaining a product or service from the debtor primarily for personal, family, or household purposes.	customer list
Automobiles, trucks, trailers, and other vehicles and accessories.	vehicle
Boats, motors, and accessories.	boat
Aircraft and accessories.	plane
Office equipment, furnishings, and supplies.	office equipment
Machinery, fixtures, equipment, and supplies used in business.	machinery
Inventory.	inventory
Animals.	animals
Crops—growing or harvested. Give particulars.	crops
Farming equipment and implements.	farm equipment
Farm supplies, chemicals, and feed.	farm supplies
Other personal property of any kind not already listed. Itemize.	other

**Table A2**  
**DIFFERENCES OF MEANS BY PRESUMED RACE**

	Presumed Black		Presumed White		Significance
	Means	Number of Observations	Means	Number of Observations	
<b>Income</b>	\$3,214	307	\$3,939	60	94.81%
Below Poverty (\$1,863)	\$1,247	71	\$853	10	97.03%
Above Poverty (\$1,863)	\$3,806	236	\$4,556	50	93.89%
Below Median (\$5,260)	\$2,690	276	\$2,587	45	70.26%
Above Median (\$5,260)	\$7,883	31	\$7,994	15	53.64%
<b>Expenditure</b>	\$3,547	308	\$4,397	67	97.34%
<b>Assets</b>	\$167,236	312	\$212,994	68	87.96%
<b>Debt</b>	\$249,797	306	\$371,746	68	95.88%
<b>Schedule C Total</b>	\$52,749	328	\$65,918	73	75.37%
Apparel	\$622	268	\$446	60	99.67%
Jewelry	\$371	198	\$303	40	86.88%
Retirement Savings	\$25,764	100	\$16,712	20	91.45%
Cash	\$126	179	\$66	41	85.78%
Checking or Savings Account	\$871	242	\$1,693	57	98.04%
Vehicle	\$3,395	189	\$4,269	38	85.83%
Homestead	\$105,523	102	\$198,232	18	94.34%
<b>Schedule B Total</b>	\$26,879	328	\$17,884	73	92.61%
Apparel	\$603	299	\$479	65	95.55%
Jewelry	\$363	224	\$325	42	71.62%
Retirement Savings	\$22,417	104	\$13,811	18	91.72%
Cash	\$122	199	\$465	46	80.40%
Checking or Savings Account	\$921	270	\$1,768	65	98.65%
Vehicle	\$8,744	223	\$9,188	46	58.01%
<b>Schedule A–Homestead</b>	\$276,245	159	\$487,509	27	99.97%

## Appendix B: Means and Medians

We generally report means for homesteads and medians for personal property because we have fewer observations for most types of personal property than we do for homesteads. We also have a greater number of outliers in the personal property data. Where the data may be skewed by outliers, the median is generally a more useful way to report data than the mean. Where we report mean values in this report it is because we believe our data are not badly skewed, and thus do not foresee an issue with utilizing mean over the median. Additionally using the mean enables us to cleanly compare two groups, which is our intent in this report. To support this assertion, we report the  $p$ -value estimates using a  $k$ -sample equality-of-medians, Wilcoxon rank-sum (sometimes referred to as the Mann-Whitney statistic) and  $t$ -test tests. It should be noted that although they are similar tests they are not the same. Below is a brief description of the  $k$ -sample and rank-sum tests.

- The  $k$ -sample equality-of-medians test is a nonparametric (no assumption about the distribution of the data is assumed) test to assess if equality of medians among two unmatched (independent) samples. It provides the chi-squared test statistic to assess whether the samples were drawn from a population with the same median.
- The Wilcoxon rank-sum test (Whitney-Mann two-sample test) assesses whether two independent samples are pulled from a population with the same distribution.

**Table B1**

### MEDIAN INCOME SIGNIFICANCE TESTS

Statistical Test	$p$ -Value
$t$ -test	0.052
$k$ -sample	0.098
Rank sum	0.116

## About The Society of Actuaries Research Institute

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