Impact of Adoption of the Uniform Bar Examination in New York

National Conference of Bar Examiners
Research Department

Contents

1. Introduction

1.1 Background

This study was undertaken to investigate the impact of adoption of the Uniform Bar Examination (UBE) in New York. The UBE was first administered in New York in July 2016. The New York Court of Appeals adopted the UBE based on recommendations from the Advisory Committee on the Uniform Bar Examination, which was appointed to study the possibility of New York adopting the UBE and to obtain input and comments from the public. A report based on the Committee's work can be accessed at https://www.nycourts.gov/ip/bar-exam/pdf/FINAL%20REPORT_DRAFT_April_28.pdf.

This study was conducted by staff from the Research Department of the National Conference of Bar Examiners (NCBE) at the request of the New York State Board of Law Examiners (NYSBLE). NCBE develops the Multistate Bar Exam (MBE), Multistate Essay Exam (MEE), and Multistate Performance Test (MPT) that constitute the UBE and constituted portions of the New York bar exam prior to New York's adoption of the UBE. NCBE staff members are committed to accurate, high-quality research and we have attempted to provide the results of analysis in as straightforward and complete a way possible to address the research questions of interest to the NYSBLE. As with any study of this type, there are strengths and limitations in the adequacy with which we can answer research questions posed given the available data.[1]

1.2 Questions

The analyses in this study were designed to address the following three primary questions:

1. **How do candidate background characteristics compare across bar exam administrations? How do they relate to performance on the bar exam in New York before and after UBE adoption?**

2. **How do candidates grouped by race/ethnicity and gender perform on the bar exam before and after UBE adoption?**

3. **How does performance on the bar exam in New York compare before and after UBE adoption?**

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[1] We have attempted to provide information, data, and highlights of strengths and limitations in a way that this study will stand on its own and be viewed a fair treatment of the research questions given the available data. For example, throughout this study, we provide statistics like means and standard deviations for different groupings of candidates so that the curious reader can dig deeper if so inclined. Appendices also provide additional breakdowns and technical treatment of the available data.

In addition, several ancillary questions were addressed, including the following:

> How does performance on the MBE in New York compare to MBE performance in all other jurisdictions before and after New York adopted the UBE?

> What candidate variables best predict performance on the bar exam?

> What are the eventual pass rates for candidates taking the New York bar exam before and after UBE adoption?

Each of these questions was intended to contribute to the overarching question of impact, specifically what was the impact of adopting the UBE on candidate performance in New York?

As indicated by the primary research questions, the overarching issue of impact of adopting the UBE was not simply a matter of reviewing the bar exam performance of candidates in New York before and after UBE adoption. Shifts in bar exam performance up or down, before versus after UBE adoption are not necessarily directly attributable to UBE adoption. If we think of bar examining as part of an ecosystem, a change in any portion of the ecosystem may lead to unforeseen shifts in a variety of places. For example, candidate preparation for the exam may change after UBE adoption to reflect the mix of content being tested. In addition, the characteristics of candidates could change in some way, perhaps completely unrelated to UBE adoption, which could lead to a shift in bar exam performance. In addition to studying performance and pass rates for all candidates taking the bar exam in New York, we studied a sub-set of candidates for whom background characteristics (i.e., undergraduate grade point average, Law School Admission Test score, law school grade point average) were available to address how these characteristics related to bar exam performance and to potential shifts in bar exam performance across time.

To be clear at the outset, there were two major potential limitations of this study related to background characteristics of candidates. First, the background characteristics included in this study (undergraduate grade point average, Law School Admission Test scores, law school grade point average) are commonly used and have been shown to have the strongest relationships with bar exam performance, but it is not a complete list of potential variables that may be related to bar exam performance. There are other background characteristics that could be meaningful to consider (e.g., bar prep course taken, grades in specific foundational courses, additional prior academic and educational opportunities, and additional psychological, social, and economic factors), but these were not available for this study. Second, the studied candidate background characteristics were not available for all candidates because (a) some of this information was simply not available (e.g., candidates educated outside the United States), (b) not all candidates

taking the bar exam agreed to share this information, and (c) not all law schools agreed to release information for their law graduates.

If the sub-group of domestic-educated candidates with available background characteristics is not representative of the entire group of domestic-educated candidates taking the New York bar exam, we cannot be confident that the sub-group generalizes to the full group of domestic-educated candidates taking the bar exam in New York (see section 3, which addresses the first question above). [2] We will attempt to determine the extent to which the sub-group was representative of the entire domestic-educated group of candidates taking the New York bar exam using available demographic information and performance on the Multistate Bar Examination (see section 2.4) and will highlight limitations when (a) describing the data, (b) presenting results and (c) interpreting results. Representativeness of data is a potential limitation of this study and any study like it where there is attrition in the data due to lack of consent or other potentially non-random missing sources of information. We encourage the reader to keep this potential limitation in mind when interpreting portions of this study that includes studying background characteristics (section 3 in particular) and remember that background characteristics were only available for domestic-educated candidates.

However, much of the analysis included in this study, including analysis of bar exam performance and pass rates by race/ethnicity and gender (sections 4 and 5, which address the second and third research questions above), included all candidates taking the bar exam in New York and was not subject to the same interpretative limitations due to the sample of candidates available for analysis. In addition, even if the sub-group with available background characteristics was not representative of the entire group of domestic-educated candidates taking the bar exam in New York, it does not necessarily indicate that the sub-group of candidates with background characteristics available cannot provide useful information regarding background characteristics and bar exam performance (and the relationship between them) for that sub-group, but it does suggest proceeding cautiously when attempting to generalize the results from the sub-group to the entire group of domestic-educated candidates taking the New York bar exam.

It is also worth noting that this study did not address the broader impact that UBE adoption had on bar applicants' opportunities for choice, specifically due to the portability of scores between jurisdictions using the UBE, and how this opportunity for choice may affect patterns of who sits for the UBE in New York. While NCBE hasn't typically observed widespread shifts in candidates following UBE adoption, it is possible that those testing in New

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[2] There are a substantial number of candidates educated outside the United States (foreign-educated) taking the New York bar exam. These candidates do not, for the most part, have background characteristics (UGPA, LSAT, LGPA) available and are more likely to have different educational experiences from domestic-educated candidates, it would be inappropriate to attempt to generalize results from a sub-set of domestic-educated candidates to all candidates (domestic- and foreign-educated) taking the New York bar exam.

York after UBE adoption may have changed compared to elsewhere. It is also possible that the group testing in New York could evolve in the future as additional jurisdictions adopt the UBE. Next we describe the samples of New York data included in this study before subsequent sections address each research question.

2. Data

2.1 Sources and Variables

The data underlying this study was based primarily on information collected by the New York State Board of Law Examiners (NYSBLE) bar applications, bar exam performance, and data obtained from law schools for candidates providing permission for law schools to share data with NYSBLE. For data received from law schools, candidates were asked by NYSBLE in writing whether candidates would allow NYSBLE to request information regarding the candidate's academic performance from law schools for purposes of this study. The information requested by NYSBLE from law schools for those candidates consenting to share their information included undergraduate grade point average (UGPA), Law School Admission Test (LSAT) score, law school grade point average (LGPA), class standing or rank, and date of law school graduation. Not all law schools with students giving permission to provide data to NYSBLE provided data to NYSBLE (see Table 2.2.1 and Section 2.2 for further explanation).

Data were combined and aggregated by NYSBLE staff into a single data file corresponding to each New York bar exam administration between July 2015 and July 2017, or three years of data. Individual candidates and schools were de-identified prior to data being shared with NCBE research staff, so that NCBE research staff could not discern the identities of individual candidates or individual schools when conducting the analysis for this study. Bar exam scores and scores on bar exam components (e.g., written and MBE) were included for all candidates and demographic information and background characteristics (e.g., UGPA, LSAT score, LGPA) were included for a subset of candidates.

The total numbers of candidates included in the data underlying this study for each bar exam administration are listed in the first row of Table 2.2.1. There were 4,193 candidates in February 2016, 4,162 in February 2017, 10,667 in July 2015, 10,297 in July 2016, and 9,932 in July 2017. These candidates represented 100% of those taking the bar exam in New York that were available for this study. The remaining rows of Table 2.1.1 are described in the next section along with additional details regarding the two primary data samples used throughout this study.

The New York bar exam immediately prior to Uniform Bar Examination (UBE) adoption consisted of three components: the Multistate Bar Examination (MBE), a written component, and a multiple-choice test on New York law (NYMC). The MBE is a multiple-choice exam and was weighted 40% of the total score, the written component was weighted 50% of the total score, and the NYMC was weighted 10% of the total score. The written component consisted of five essay questions developed by New York and one Multistate Performance Test (MPT) task. Each bar exam component was scaled to the MBE and scores were reported on a scale with a range from 0 to 1,000. To allow for comparisons of performance before and after UBE adoption, scores were

rescaled to the UBE scale by dividing them by 2.5 (for details, see section 2.4). The passing score on the 1,000-point New York bar exam prior to UBE adoption was 665.

The UBE consists of two components: MBE and written. The written component consists of six Multistate Essay Examinations (MEEs) and two MPTs. The MBE and written components are each weighted 50% of the total score (the MEEs comprise 30% of the total score and the MPTs 20% of the total score). Written scores are scaled to the 200-point MBE scale such that, when combined, total UBE scores are on a 400-point scale. The passing score in New York on the 400-point UBE scale after UBE adoption is 266.[3]

2.2 Samples

Two primary samples of data were used in this study. The samples contained data from July 2015, February 2016, July 2016, and July 2017 bar exams in New York. New York adopted the UBE in July 2016, so the bar exam administrations included in this study cover two administrations prior to UBE adoption (July 2015 and February 2016) and three administrations after UBE adoption (July 2016, February 2017, and July 2017). As will be illustrated throughout this study, the February bar exam administrations tended to look different from and tended to be less stable than July bar exam administrations for a number of reasons, so we placed more attention on the July exams.

The first sample, referred to as the *New York State Board of Law Examiners (NYSBLE) sample*, contained the following information for all candidates taking the bar exam in New York: generic (unidentifiable) school id, generic candidate id, race/ethnicity, gender, education origin, bar exam scores, passing status, and number of bar exam attempts (which was converted into a variable to indicate first-time taker status in New York[4]). The *NYSBLE sample* was used to address questions related to trends in bar exam performance and demographic characteristics across bar exams (e.g., sections 4, 5, and 8).

The second sample, referred to as the *school-based sample,* was a subset of the NYSBLE sample that contained available school-related information from domestic-educated candidates in addition to bar exam and demographic information. Specifically, in addition to all of the information contained in the NYSBLE sample, the school-based sample included undergraduate grade point average (UGPA), Law School Admission Test (LSAT) score, and law school grade point average (LGPA) for each candidate. The school-based sample was used to address questions related to background characteristics and bar exam performance, specifically question

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[3] A UBE passing score of 266 (on the 400-point UBE scale) corresponds to a passing score of 665 (on the previous 1,000-point scale). The equivalent score on the 200-point MBE scale is 133.

[4] Some candidates who were identified as first-time takers could have taken the bar examination in another jurisdiction. The numbers of such cross-jurisdictional repeaters is presumably small but could have become larger after UBE adoption when candidates have more choices of where to take the exam.

1 (section 3), although analysis throughout this study included the school-based sample (e.g., sections 4, 5, and 7). In identifying the school-based sample, two conditions needed to be met to ensure that the data would support analysis to address questions related to candidate background characteristics. First, only candidates with data that included valid UGPA, LSAT score, and LGPA, in addition to bar exam scores, were identified for inclusion in the school-based sample. Second, only candidates from schools with a predetermined minimum number of candidates, defined as at least 25, were identified for inclusion in the school based sample. The school size requirement was needed to make statistical adjustments for LGPAs so that they could be used in the analysis in a meaningful way across schools (this is described in more detail in section 2.4).

Table 2.2.1 illustrates peeling back the layers of data from the entire NYSBLE sample to the school-based sample. The first row of the table contains the number of candidates in the NYSBLE sample for February 2016 to February 2017 and July 2015 to July 2017, which each consisted of 100% of candidates. The second row of Table 1 contains the counts and percentage of the NYBLE sample that was domestic educated: 56.0% and 56.9% for February 2016 and 2017, and 70.4%, 70.8%, and 68.2% for July 2015 to July 2017. Of these, about 19.2% and 47.6% in February administrations and 26.5%, 60.1%, or 58.5% in July administrations gave permission for NYSBLE to obtain law school information for the candidates. February 2016 and July 2015 had substantially smaller percentages of candidates giving permission to release law school data because candidates were asked retrospectively in 2016 after the bar exam was complete for permission for their information, whereas candidates in February 2016 to July 2017 were asked close to the bar exam administration whether they would share law school information with NYSBLE.

Table 2.2.1
Counts and Percentages of New York State Board of Law Examiners (NYSBLE) Sample Represented by Different Groupings of Candidates

		February 2016	February 2017	July 2015	July 2016	July 2017
NYSBLE Sample	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(4193)	(4162)	(10667)	(10297)	(9932)
Domestic-educated	%	56.0%	56.9%	70.4%	70.8%	68.2%
	(n)	(2346)	(2370)	(7513)	(7292)	(6776)
Authorization for Law School Information = Yes	%	19.2%	47.6%	26.5%	60.1%	58.5%
	(n)	(807)	(1981)	(2827)	(6186)	(5815)
School Furnished Data = Yes	%	16.0%	21.8%	23.2%	52.1%	45.9%
	(n)	(672)	(908)	(2478)	(5363)	(4559)
School-based Sample*	%	12.7%	17.4%	19.5%	43.9%	37.8%
	(n)	(534)	(723)	(2084)	(4520)	(3753)

*Valid UGPA, LSAT score, and LGPA and schools with at least 25 candidates.

Schools provided data for 16.0% and 21.8% for February administrations and 23.2%, 52.1%, and 45.9% for July administrations. A total of about 12.7% and 17.4% for February administrations and about 19.5%, 43.9%, and 37.8% for July were included in the school-based sample. In addition to having valid UGPAs, LSAT scores, and LGPAs, candidates in the school-based sample went to a school where at least 25 of candidates supplied the NYSBLE with data. The percentages reported in Table 2.2.1 are based on the total NYSBLE sample, however, the largest possible school-based sample would consist only of all domestic-educated NYSBLE candidates, so Table 2.2.2 contains only the domestic-educated and school-based sample and lists the percentages of candidates in the school-based sample based on the maximum possible number of candidates (all domestic-educated candidates) that could have been in the school-based sample. The school-based sample for February administrations consisted of 22.8% and 30.5% of domestic-educated candidates and July administrations consisted of 27.8%, 62.1%, and 55.4% of domestic-educated candidates. In other words, at least roughly 40% of domestic-educated candidates at each administration of the bar exam in New York were not included in the school-based sample for various reasons. There was a large difference in the percentage of candidates included in the school-based sample between July 2015 (27.7%) and July 2016 (62.0%), which coincides with the transition to UBE.

Table 2.2.2
Counts and Percentages of Domestic-Educated Candidates

		February 2016	February 2017	July 2015	July 2016	July 2017
Domestic-educated	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(2346)	(2370)	(7513)	(7292)	(6776)
School-based Sample	%	22.8%	30.5%	27.7%	62.0%	55.4%
	(n)	(534)	(723)	(2084)	(4520)	(3753)

An important consideration in being able to interpret results in the transition to UBE in light of rather large differences in the percentages of candidates represented in the school-based sample between July 2015 and July 2016 is the representativeness of the school-based sample of the domestic-educated NYSBLE sample. The degree to which the school-based sample is not representative of the group of domestic-educated candidates will limit the interpretations that can be drawn from the analysis, specifically whether potential patterns of performance can be attributed to New York's transition to UBE or to shifts in the representativeness of the school-based sample of the whole group.

Representativeness is an issue because (a) some candidates did not provide permission to share law school data, (b) some schools did not provide data, and (c) some schools were excluded due to contributing fewer than 25 candidates to the sample. It is an unavoidable

possibility that the school-based sample may not be completely representative of domestic-educated bar exam candidates in New York. We will attempt to address representativeness of the school-based sample of domestic-educated candidates in the NYSBLE sample in section 2.3 after we provide additional descriptions of the NYSBLE sample and school-based sample.

2.2.1 New York State Board of Law Examiners (NYSBLE) Sample (July 2015 to July 2017)

The NYSBLE sample included all available candidates taking the bar exam in New York. Breakdowns of the NYSBLE sample listed below (and in Appendix A) illustrate that candidates taking the bar exam in New York between July 2015 and July 2017 were not static and showed evidence of shifting across time in terms of first-time takers, origin of education, gender, and race/ethnicity. These shifts by group will be helpful to consider when comparing candidates taking a particular bar exam and is one of the reasons that many of the analyses in this study were broken out by different groupings of candidates.

Table 2.2.3 lists the number of law schools represented in the NYSBLE sample of candidates taking the bar exam in New York between July 2015 and July 2017. Between 167 and 184 law schools were represented and, while the differences were not very large, a slightly larger number of schools were represented in (a) February 2017 compared to February 2016 (172 versus 167) and (b) July 2017 and July 2016 compared to July 2015 (184 and 183 versus 178).

Table 2.2.3
Number of Schools
New York State Board of Law Examiners (NYSBLE) Sample

Bar Exam Administration	
February 2016	167
February 2017	172
July 2015	178
July 2016	183
July 2017	184

Table 2.2.4 shows the numbers and percentages of domestic- and foreign-educated candidates taking the bar exam in New York between July 2015 and July 2017. The total number of candidates decreased between July 2015 and July 2017 from 10,667 to 9,932. In addition, the percentage of domestic-educated candidates decreased from 70.4% in July 2015 to 68.2% in July 2017 (or conversely, the percentage of foreign-educated candidates increased from 29.6% to 31.8%). A 2.2% change represents a difference of roughly 219 candidates in July 2017. There was a slight increase in the percentage of domestic-educated candidates between July 2015

(70.4%) and July 2016 (70.8%), even though the number of candidates decreased from 7,513 to 7,292.

Table 2.2.4
Numbers and Percentages of Candidates
New York State Board of Law Examiners Sample
Origin of Education

		February 2016	February 2017	July 2015	July 2016	July 2017
Domestic	%	56.0%	56.9%	70.4%	70.8%	68.2%
	(n)	(2346)	(2370)	(7513)	(7292)	(6776)
Foreign	%	44.0%	43.1%	29.6%	29.2%	31.8%
	(n)	(1847)	(1792)	(3154)	(3005)	(3156)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(4193)	(4162)	(10667)	(10297)	(9932)

Table 2.2.5 displays the numbers and percentages of candidates taking the bar exam for the first time or repeating the bar exam between July 2015 and July 2017. February bar exam administrations had larger percentages of repeaters than July exams, with roughly 69% (February 2016) or 65% (February 2017) of candidates repeating in February compared to closer to 20% in July. February bar exams typically contain larger percentages of candidates repeating the bar exam. Between July 2015 and July 2016, the percentage of repeaters was similar (19.5% and 19.4%, respectively) before increasing slightly in July 2017 (21.3%). While fewer candidates took the bar exam in New York after UBE adoption in July 2016, the percentages of first-time takers and repeaters were similar immediately before and immediately after UBE adoption.

Table 2.2.5
Numbers and Percentages of Candidates
New York Board of Law Examiners Sample
Taker Status

		February 2016	February 2017	July 2015	July 2016	July 2017
First-Time Taker	%	31.1%	34.9%	80.5%	80.6%	78.7%
	(n)	(1303)	(1454)	(8587)	(8297)	(7815)
Repeater	%	68.9%	65.1%	19.5%	19.4%	21.3%
	(n)	(2890)	(2708)	(2080)	(2000)	(2117)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(4193)	(4162)	(10667)	(10297)	(9932)

While the overall percentage of first-time takers was similar across July 2015 and July 2016 and increased slightly in July 2017, the percentage of domestic-educated first-time takers

(Table 2.2.6) decreased across July administration from 87.0% to 85.5% to 84.7% and the foreign-educated first-time takers (in Table 2.2.7) increased slightly between July 2015 and July 2016 (from 65.0% to 68.7%) before decreasing back to 65.7% in July 2017. There was a slightly larger percentage of foreign-educated first-time takers in July 2016 compared to July 2015, which compensated for a slight drop in the percentage of domestic-educated first-time takers during the same period. While the percentages of first-time takers before and after UBE adoption were similar (Table 2.2.5), foreign-educated candidates were more heavily represented in the first-time taker group in July 2016 compared to July 2015. The percentage of first-time takers in February exams increased for domestic and foreign-educated candidates between 2016 and 2017.

Table 2.2.6
Numbers and Percentages of Candidates
New York Board of Law Examiners Sample
Domestic-educated Taker Status

		February 2016	February 2017	July 2015	July 2016	July 2017
First-Time Taker	%	34.2%	38.2%	87.0%	85.5%	84.7%
	(n)	(803)	(905)	(6536)	(6232)	(5742)
Repeater	%	65.8%	61.8%	13.0%	14.5%	15.3%
	(n)	(1543)	(1465)	(977)	(1060)	(1034)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(2346)	(2370)	(7513)	(7292)	(6776)

Table 2.2.7
Numbers and Percentages of Candidates
New York Board of Law Examiners Sample
Foreign-educated Taker Status

		February 2016	February 2017	July 2015	July 2016	July 2017
First-Time Taker	%	27.1%	30.6%	65.0%	68.7%	65.7%
	(n)	(500)	(549)	(2051)	(2065)	(2073)
Repeater	%	72.9%	69.4%	35.0%	31.3%	34.3%
	(n)	(1347)	(1243)	(1103)	(940)	(1083)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(1847)	(1792)	(3154)	(3005)	(3156)

The percentage of female candidates was larger than the percentage of male candidates at each bar exam administration between February 2016 and July 2017 (Table 2.2.8). In addition, the percentage of female candidates increased slightly from 53.5% to 56.6% between February 2016 and February 2017 and from 51.5% to 51.9% to 52.9% between July 2015 and July 2017. A portion of this increase could be due to a slight drop in the percentage of candidates omitting

their gender over time. The percentage of males remained the same between July 2015 and July 2016 (46.4%) before decreasing in July 2017 (45.2%) and also decreased between February 2016 (44.2%) and February 2017 (41.4%).

Table 2.2.8
Numbers and Percentages of Candidates
New York Board of Law Examiners Sample
Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	%	53.5%	56.6%	51.5%	51.9%	52.9%
	(n)	(2245)	(2357)	(5489)	(5349)	(5258)
Male	%	44.2%	41.4%	46.4%	46.4%	45.2%
	(n)	(1854)	(1723)	(4945)	(4773)	(4485)
Omitted	%	2.2%	2.0%	2.2%	1.7%	1.9%
	(n)	(94)	(82)	(233)	(175)	(189)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(4193)	(4162)	(10667)	(10297)	(9932)

Table 2.2.9 displays the numbers and percentages of candidates by race/ethnicity between July 2015 and July 2017 bar exams in New York. The percentages of Caucasian/White candidates decreased between July 2015 and July 2017 (50.7% to 50.3% to 47.5%) and increased between February 2016 and February 2017 (38.2% to 40.5%). The percentage of each of the other racial/ethnic groups either remained similar or increased between July 2015 and July 2017. In February, the percentage of Asian/Pacific Islander candidates decreased from 28.7% to 25.6%, the percentage of Black/African American candidates increased from 12.3% to 13.9%, and the percentage of Hispanic/Latino candidates increased from 7.3% to 8.0%. The remaining groups tended to have small numbers of candidates making interpretation of shifts difficult, and the other and omitted groups decreased somewhat across Februarys and didn't differ substantially across Julys.

Table 2.2.9
Numbers and Percentages of Candidates
New York Board of Law Examiners Sample
Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	%	38.2%	40.5%	50.7%	50.3%	47.5%
	(n)	(1601)	(1687)	(5404)	(5177)	(4722)
Asian/Pacific Islander	%	28.7%	25.6%	24.9%	24.7%	25.9%
	(n)	(1204)	(1064)	(2652)	(2547)	(2574)
Black/African American	%	12.3%	13.9%	8.2%	8.6%	9.3%
	(n)	(516)	(579)	(877)	(886)	(928)
Hispanic/Latino	%	7.3%	8.0%	5.6%	6.3%	6.3%
	(n)	(307)	(332)	(600)	(647)	(629)
Puerto Rican	%	1.5%	1.5%	1.1%	1.3%	1.1%
	(n)	(63)	(61)	(114)	(132)	(106)
Chicano/Mexican American	%	0.4%	0.3%	0.5%	0.5%	0.4%
	(n)	(17)	(12)	(52)	(47)	(37)
American Indian/Alaskan Native	%	0.2%	0.1%	0.1%	0.1%	0.1%
	(n)	(8)	(3)	(9)	(8)	(10)
Other	%	7.6%	6.7%	5.2%	5.0%	5.6%
	(n)	(317)	(280)	(554)	(517)	(560)
Omitted	%	3.8%	3.5%	3.8%	3.3%	3.7%
	(n)	(160)	(144)	(405)	(336)	(366)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(4193)	(4162)	(10667)	(10297)	(9932)

Table 2.2.10 contains the numbers and percentages of domestic-educated candidates by gender in the NYSBLE sample. There was a larger percentage of males in July 2015 (49.6%) but larger percentage of females at each of the other Julys (49.5% and 50.7%) and Februarys (49.4% and 54.0%). The percentage of females increased across Februarys and across Julys.

Table 2.2.10
Numbers and Percentages of Candidates
New York Board of Law Examiners Sample
Domestic-educated Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	%	49.4%	54.0%	48.2%	49.5%	50.7%
	(n)	(1159)	(1279)	(3621)	(3609)	(3436)
Male	%	48.1%	44.0%	49.6%	48.7%	47.4%
	(n)	(1128)	(1042)	(3725)	(3552)	(3211)
Omitted	%	2.5%	2.1%	2.2%	1.8%	1.9%
	(n)	(59)	(49)	(167)	(131)	(129)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(2346)	(2370)	(7513)	(7292)	(6776)

Table 2.2.11 contains the numbers and percentages of domestic-educated first-time takers in the NYSBLE sample by gender. Similar to the domestic-educated group, the domestic-educated first-time takers had a larger percentage of males in July 2015 and a larger percentage of females in each of the other Julys. February 2016 had a larger percentage of males and February 2017 had a larger percentage of females. The percentage of females increased across Februarys and across Julys.

Table 2.2.11
Numbers and Percentages of Candidates
New York Board of Law Examiners Sample
Domestic-educated First-time Taker Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	%	48.4%	50.9%	48.1%	49.6%	50.4%
	(n)	(389)	(461)	(3143)	(3092)	(2896)
Male	%	49.3%	46.4%	49.8%	48.8%	47.7%
	(n)	(396)	(420)	(3253)	(3043)	(2738)
Omitted	%	2.2%	2.7%	2.1%	1.6%	1.9%
	(n)	(18)	(24)	(140)	(97)	(108)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(803)	(905)	(6536)	(6232)	(5742)

Tables 2.2.12 and 2.2.13 contain the numbers and percentages of domestic-educated and domestic-educated first-time takers, respectively, for the NYSBLE sample by race/ethnicity. Similar to the entire NYSBLE sample, the percentage of Caucasian/White candidates increased slightly across Februarys and decreased across Julys.

Appendix A contains numbers and percentages of candidates in the NYSBLE sample for the following additional groupings of candidates: foreign-educated by gender, foreign-educated by race/ethnicity, gender by race/ethnicity, educational origin by gender and race/ethnicity, educational origin and taker status by gender and race/ethnicity.

Table 2.2.12
Numbers and Percentages of Candidates
New York Board of Law Examiners Sample
Domestic-educated Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	%	47.5%	48.0%	61.7%	59.4%	57.3%
	(n)	(1115)	(1137)	(4633)	(4333)	(3882)
Asian/Pacific Islander	%	15.5%	14.2%	14.0%	14.7%	15.6%
	(n)	(363)	(337)	(1050)	(1074)	(1054)
Black/African American	%	15.6%	17.8%	9.0%	9.4%	10.7%
	(n)	(366)	(423)	(678)	(687)	(727)
Hispanic/Latino	%	6.6%	7.9%	5.0%	5.8%	5.7%
	(n)	(154)	(187)	(377)	(425)	(385)
Puerto Rican	%	2.7%	2.6%	1.5%	1.8%	1.6%
	(n)	(63)	(61)	(114)	(132)	(106)
Chicano/Mexican American	%	0.7%	0.5%	0.7%	0.6%	0.5%
	(n)	(17)	(12)	(51)	(47)	(35)
American Indian/Alaskan Native	%	0.3%	0.1%	0.1%	0.1%	0.1%
	(n)	(8)	(3)	(9)	(8)	(9)
Other	%	6.6%	5.3%	4.1%	4.7%	4.7%
	(n)	(156)	(126)	(308)	(341)	(319)
Omitted	%	4.4%	3.5%	3.9%	3.4%	3.8%
	(n)	(104)	(84)	(293)	(245)	(259)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(2346)	(2370)	(7513)	(7292)	(6776)

Table 2.2.13
Numbers and Percentages of Candidates
New York Board of Law Examiners Sample
Domestic-educated First-time Taker Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	%	56.0%	56.5%	64.7%	62.5%	60.4%
	(n)	(450)	(511)	(4229)	(3894)	(3467)
Asian/Pacific Islander	%	12.3%	11.9%	13.5%	14.4%	15.4%
	(n)	(99)	(108)	(884)	(897)	(884)
Black/African American	%	13.1%	12.9%	7.5%	7.8%	8.6%
	(n)	(105)	(117)	(490)	(483)	(492)
Hispanic/Latino	%	5.5%	6.9%	4.6%	5.8%	5.3%
	(n)	(44)	(62)	(299)	(359)	(304)
Puerto Rican	%	1.9%	2.4%	1.2%	1.5%	1.4%
	(n)	(15)	(22)	(79)	(96)	(80)
Chicano/Mexican American	%	0.5%	0.3%	0.7%	0.6%	0.5%
	(n)	(4)	(3)	(44)	(37)	(29)
American Indian/Alaskan Native	%	0.4%	0.2%	0.1%	0.1%	0.1%
	(n)	(3)	(2)	(7)	(5)	(7)
Other	%	6.1%	4.3%	3.8%	4.3%	4.5%
	(n)	(49)	(39)	(250)	(268)	(259)
Omitted	%	4.2%	4.5%	3.9%	3.1%	3.8%
	(n)	(34)	(41)	(254)	(193)	(220)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(803)	(905)	(6536)	(6232)	(5742)

2.2.2 School-based Sample

The school-based sample included candidates who (a) gave permission to share their law school-related information with NYSBLE, (b) attended schools that provided data to NYSBLE, (c) had valid UGPA,[5] LGPA and LSAT information, and (d) attended schools contributing 25 or more students to the sample. The school-based sample consisted of a sub-set of domestic-educated candidates from the NYSBLE sample of all candidates taking the bar exam in New York at each bar exam administration between July 2015 and July 2017. As will be discussed later, requiring a minimum number of candidates in each school was necessary for purposes of rescaling the LGPAs so that they were usable across law schools; a large enough number of candidates were needed within each school to conduct analysis within schools (see section 2.4).

Because the school-based sample only included domestic-educated candidates, by definition, reference to the sample will not explicitly indicate domestic-educated, although it should be understood that all analysis of the school-based sample included domestic-educated candidates only. Throughout this study, the school-based sample was analyzed two ways, one with the entire school-based sample and another with the first-time takers from the school-based sample. These two groupings of the school-based sample correspond to subsets of the domestic-educated and domestic-educated first-time takers in the NYSBLE sample.

Table 2.2.14 lists the number of schools represented in the school-based sample. These were schools that had at least 25 candidates represented. There were between 49 and 54 schools represented in the school-based sample at each bar exam. Recall that the entire NYSBLE sample had between 167 and 184 schools, so many fewer schools were represented in the school-based sample compared to the entire NYSBLE sample. In addition to schools with fewer than 25 candidates represented, there were a number of schools (including schools in New York) that refused to share data with the New York State Board of Law Examiners, and therefore could not be included in the school-based sample. Therefore, we cannot know for certain that the schools included in the school-based sample well represented the entire group of domestic schools (and by extension, domestic-educated candidates) included in the bar exam in New York. After summarizing some of the general characteristics of the school-based sample below, the next section will include side-by-side comparisons of the school-based sample and reference sample of domestic-educated candidates in the NYSBLE sample to more closely review the extent to which the school-based sample appeared reasonably representative of domestic-educated candidates taking the bar exam in New York.

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[5] Candidates attending schools that did not use a 4-point GPA were eliminated from the sample.

Table 2.2.14
Number of Schools
School-based Sample

Bar Exam Administration	
February 2016	49
February 2017	51
July 2015	54
July 2016	54
July 2017	54

The school-based sample included a larger percentage of first-time takers in the July exams, roughly 90%, and a particularly small percentage of first-time takers in the February exams, roughly 13% to 15% (Table 2.2.15) compared to the NYSBLE sample (Table 2.2.6). The number of February first-time takers was rather small (85 or 92), which limits the usefulness of the available first-time taker data in the school-based sample. Care will be needed when interpreting first-time taker data in the school-based sample in February throughout this study.

Table 2.2.15
Numbers and Percentages of Candidates in the School-based Sample
Taker Status

		February 2016	February 2017	July 2015	July 2016	July 2017
First-Time Taker	%	15.9%	12.7%	89.9%	90.0%	90.7%
	(n)	(85)	(92)	(1873)	(4070)	(3405)
Repeater	%	84.1%	87.3%	10.1%	10.0%	9.3%
	(n)	(449)	(631)	(211)	(450)	(348)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(534)	(723)	(2084)	(4520)	(3753)

Table 2.2.16 contains the numbers and percentages of candidates in the school-based sample by gender. The percentage of females and males was the same in February 2016 (49.6%), the percentage of females was larger than males in February 2017 (54.4% versus 45.5%) and in July 2015 (49.8% versus 49.3%), and the percentage of females was smaller than males in July 2016 and July 2017. Candidates omitting gender represented 1% or less of the school-based sample.

Table 2.2.16
Numbers and Percentages of Candidates
School-based Sample
Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	%	49.6%	54.4%	49.8%	49.2%	49.1%
	(n)	(265)	(393)	(1037)	(2223)	(1844)
Male	%	49.6%	45.5%	49.3%	50.1%	50.1%
	(n)	(265)	(329)	(1027)	(2266)	(1880)
Omitted	%	0.7%	0.1%	1.0%	0.7%	0.8%
	(n)	(4)	(1)	(20)	(31)	(29)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(534)	(723)	(2084)	(4520)	(3753)

Table 2.2.17 lists the numbers and percentages of candidates in the school-based sample by race/ethnicity.[6] The percentage of candidates in the Caucasian/White group declined somewhat across February exams (49.4% to 48.0%) and across July exams (67.5% to 65.3% to 63.6%). In addition, the number of candidates represented in the Puerto Rican, Chicano/Mexican American, and American Indian/Alaskan Native, Other, and Omitted groups were small, particularly in February.

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[6] Appendix B contains breakdowns by gender and race/ethnicity for the school-based sample.

Table 2.2.17
Numbers and Percentages of Candidates
School-based Sample
Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	%	49.4%	48.0%	67.5%	65.3%	63.6%
	(n)	(264)	(347)	(1407)	(2953)	(2388)
Asian/Pacific Islander	%	15.9%	15.2%	11.3%	12.7%	14.3%
	(n)	(85)	(110)	(235)	(575)	(538)
Black/African American	%	15.7%	19.5%	8.7%	8.3%	8.2%
	(n)	(84)	(141)	(182)	(374)	(307)
Hispanic/Latino	%	8.2%	9.1%	5.0%	5.9%	5.7%
	(n)	(44)	(66)	(104)	(266)	(214)
Puerto Rican	%	3.2%	2.5%	1.3%	1.7%	1.2%
	(n)	(17)	(18)	(27)	(76)	(44)
Chicano/Mexican American	%	1.1%	0.6%	0.6%	0.5%	0.5%
	(n)	(6)	(4)	(12)	(24)	(20)
American Indian/Alaskan Native	%	0.4%	0.1%	0.0%	0.1%	0.1%
	(n)	(2)	(1)	(1)	(6)	(5)
Other	%	4.1%	4.1%	3.5%	3.9%	4.0%
	(n)	(22)	(30)	(73)	(176)	(151)
Omitted	%	1.9%	0.8%	2.1%	1.5%	2.3%
	(n)	(10)	(6)	(43)	(70)	(86)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(534)	(723)	(2084)	(4520)	(3753)

Table 2.2.18 contains numbers and percentages of first-time takers in the school-based sample by gender. Males represented a slightly larger percentage of the sample across July exams (49.6%, 50.1%, and 49.9%) compared to females (49.4%, 49.2%, and 49.3%). February exams had larger percentages of males than females (55.3% versus 43.5% and 52.2% versus 47.8%), although the number of candidates represented by each group was fairly small (37 to 48 candidates) and likely led to less stable percentages for February.

Table 2.2.18
Numbers and Percentages of Candidates
School-based Sample
First-time Taker Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	%	43.5%	47.8%	49.4%	49.2%	49.3%
	(n)	(37)	(44)	(925)	(2004)	(1678)
Male	%	55.3%	52.2%	49.6%	50.1%	49.9%
	(n)	(47)	(48)	(929)	(2038)	(1700)
Omitted	%	1.2%	.	1.0%	0.7%	0.8%
	(n)	(1)	.	(19)	(28)	(27)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(85)	(92)	(1873)	(4070)	(3405)

Table 2.2.19 lists the numbers and percentages of first-time taker candidates in the school-based sample by race/ethnicity. Across Julys, the percentage of Caucasian/White candidates declined (69.3% to 67.0% to 65.4%) and across Februarys, the percentage of Caucasian/White candidates increased from 41.2% to 58.7%, although the sample size was fairly small. The analysis of first-time takers by race/ethnicity in February included too few candidates to be confident in the results; many groups had fewer than 20 candidates. Analysis of February first-time takers in the school-based sample in subsequent sections will tend to exclude analysis for groups with fewer than 20 candidates because the results begin to become unstable and tell us more about the characteristics of the individuals available than about characteristics of groups. In the next section, the representativeness of the school-based sample of the domestic-educated NYSBLE sample is reviewed.

Table 2.2.19
Numbers and Percentages of Candidates
School-based Sample
First-time Taker Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	%	41.2%	58.7%	69.3%	67.0%	65.4%
	(n)	(35)	(54)	(1298)	(2726)	(2228)
Asian/Pacific Islander	%	18.8%	16.3%	11.3%	12.5%	14.0%
	(n)	(16)	(15)	(212)	(510)	(477)
Black/African American	%	20.0%	13.0%	7.8%	7.3%	7.0%
	(n)	(17)	(12)	(146)	(299)	(240)
Hispanic/Latino	%	7.1%	7.6%	4.4%	5.8%	5.3%
	(n)	(6)	(7)	(83)	(235)	(182)
Puerto Rican	%	4.7%	2.2%	1.0%	1.5%	1.1%
	(n)	(4)	(2)	(18)	(62)	(36)
Chicano/Mexican American	%	.	.	0.6%	0.5%	0.5%
	(n)	.	.	(12)	(21)	(18)
American Indian/Alaskan Native	%	1.2%	.	0.1%	0.1%	0.1%
	(n)	(1)	.	(1)	(3)	(5)
Other	%	4.7%	1.1%	3.3%	3.8%	4.0%
	(n)	(4)	(1)	(61)	(153)	(136)
Omitted	%	2.4%	1.1%	2.2%	1.5%	2.4%
	(n)	(2)	(1)	(42)	(61)	(83)
All	%	100.0%	100.0%	100.0%	100.0%	100.0%
	(n)	(85)	(92)	(1873)	(4070)	(3405)

2.3 Representativeness of the School-based Sample

As described above, the school based sample consisted of a sub-group of candidates taking the bar exam in New York. Table 2.2.2 shows that the percentages of domestic-educated candidates represented in the school-based sample prior to UBE adoption, specifically for July 2015 and February 2016, were smaller (22.8% and 27.7%, respectively) than those represented in the July 2016 and July 2017 exams after UBE adoption (62.0% and 55.4%, respectively). The primary explanation for the smaller percentage of candidates represented in July 2015 and February 2016 was that requests for authorization to share data were obtained from candidates after the test date for these two administrations, whereas authorization was obtained at the time of bar exam application for July 2016 and July 2017. February 2017 also had relatively low representation (roughly 30%) likely due in part to an issue that arose in data collection requiring

NYSBLE to follow up to request data from schools for additional candidates from February 2017.[7]

The school-based sample was used primarily to study the background characteristics (e.g., law school grades) of candidates. To properly generalize the results from the school-based sample to all domestic-educated candidates taking the New York bar exam (i.e., the domestic-educated NYSBLE sample), the school-based sample should (a) be reasonably representative of the entire group of domestic-educated candidates taking the New York bar exam and (b) be similarly representative across bar exam administrations (e.g., July 2015 and July 2016). Restated as questions, we would first like to know how representative is the school-based sample of the domestic-educated NYSBLE sample? Second, is there evidence that the representativeness of candidates in the school-based sample has shifted in the period just before and just after UBE adoption in a way that would undermine attributing changes in performance (or lack thereof) to UBE adoption? To address these two questions, we examined the characteristics of candidates included in the school-based sample compared to the domestic-educated NYSBLE sample. We cannot definitively determine the representativeness of the school-based sample of domestic-educated New York candidates based solely on the characteristics of candidates studied below, and this is a limitation that needs consideration when interpreting results from the school-based sample. However, we can attempt to determine the extent to which available characteristics of the school-based sample appear similar to the reference sample of domestic-educated candidates in the NYSBLE sample, keeping in mind that our goal would be to generalize analysis from the school-based sample to the entire group of domestic-educated candidates taking the New York bar exam. To preview the results below, it appeared that there were some differences between the school-based sample and reference-group domestic-educated sample, particularly for the February bar exam administrations.

The February 2016 school-based sample had the same percentage of female and male candidates and the reference group had slightly more female than male candidates (Table 2.3.1). February 2017, July 2015 and July 2016 had similar patterns of female to male candidate percentages in the school-based sample and reference sample. July 2017 had a larger percentage of female candidates in the reference sample and a slightly smaller percentage of female candidates in the school-based sample. Somewhat smaller percentages of candidates in the school-based sample than in the reference sample omitted gender. The differences across

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[7] Some candidates from February 2017 agreeing to share background information with NYSBLE were inadvertently excluded from requests for data from law schools. NYSBLE staff followed up with law schools to obtain information for these candidates, but it resulted in attaining somewhat lower percentages of representation than would have otherwise been expected given the percentages represented by July 2016 and July 2017. This issue resulted in a somewhat larger percentage of candidates represented in February 2017 (roughly 30%) compared to February 2016 (roughly 22%) but was nowhere near the roughly 30 percentage point differential observed between July 2015 and July 2016 (see Table 2.2.2).

samples were relatively small and did not indicate that the school-based sample was particularly different from the reference sample based on gender.

Table 2.3.1
Numbers and Percentages of Candidates in February
School-based Sample and Reference Sample
Gender

		February 2016		February 2017	
		School-based Sample	Reference Sample	School-based Sample	Reference Sample
Female	%	49.6%	49.4%	54.4%	54.0%
	(n)	(265)	(1159)	(393)	(1279)
Male	%	49.6%	48.1%	45.5%	44.0%
	(n)	(265)	(1128)	(329)	(1042)
Omitted	%	0.7%	2.5%	0.1%	2.1%
	(n)	(4)	(59)	(1)	(49)
All	(n)	(534)	(2346)	(723)	(2370)

Table 2.3.2
Numbers and Percentages of Candidates in July
School-based Sample and Reference Sample
Gender

		July 2015		July 2016		July 2017	
		School-based Sample	Reference Sample	School-based Sample	Reference Sample	School-based Sample	Reference Sample
Female	%	49.8%	48.2%	49.2%	49.5%	49.1%	50.7%
	(n)	(1037)	(3621)	(2223)	(3609)	(1844)	(3436)
Male	%	49.3%	49.6%	50.1%	48.7%	50.1%	47.4%
	(n)	(1027)	(3725)	(2266)	(3552)	(1880)	(3211)
Omitted	%	1.0%	2.2%	0.7%	1.8%	0.8%	1.9%
	(n)	(20)	(167)	(31)	(131)	(29)	(129)
All	(n)	(2084)	(7513)	(4520)	(7292)	(3753)	(6776)

Tables 2.3.3 and 2.3.4 display the percentages of candidates by race/ethnicity in the school-based sample compared to the reference sample for each New York bar exam between July 2015 and July 2017. The Caucasian/White group was slightly over represented in the school-based samples in July, with corresponding under representation of other groups (with a few exceptions); over-representation of the Caucasian/White group was slightly larger for July 2015 compared to July 2016. The Caucasian/White group was also over represented in the school-based sample for February 2016 and similarly represented in February 2017. Representation in other groups were somewhat mixed but tended not to differ much between school-based sample and reference sample, especially when considering that the number of candidates represented was small in some instances.

Table 2.3.3
Numbers and Percentages of Candidates in February
School-based Sample and Reference Sample
Race/Ethnicity

		February 2016		February 2017	
		School-based Sample	Reference Sample	School-based Sample	Reference Sample
Caucasian/White	%	49.4%	47.5%	48.0%	48.0%
	(n)	(264)	(1115)	(347)	(1137)
Asian/Pacific Islander	%	15.9%	15.5%	15.2%	14.2%
	(n)	(85)	(363)	(110)	(337)
Black/African American	%	15.7%	15.6%	19.5%	17.8%
	(n)	(84)	(366)	(141)	(423)
Hispanic/Latino	%	8.2%	6.6%	9.1%	7.9%
	(n)	(44)	(154)	(66)	(187)
Puerto Rican	%	3.2%	2.7%	2.5%	2.6%
	(n)	(17)	(63)	(18)	(61)
Chicano/Mexican American	%	1.1%	0.7%	0.6%	0.5%
	(n)	(6)	(17)	(4)	(12)
American Indian/Alaskan Native	%	0.4%	0.3%	0.1%	0.1%
	(n)	(2)	(8)	(1)	(3)
Other	%	4.1%	6.6%	4.1%	5.3%
	(n)	(22)	(156)	(30)	(126)
Omitted	%	1.9%	4.4%	0.8%	3.5%
	(n)	(10)	(104)	(6)	(84)
All	(n)	(534)	(2346)	(723)	(2370)

Looking only at the school-based samples across bar exams, it was encouraging to see that despite differences in the number of candidates represented, specifically between July 2015 and July 2016, the percentages of candidates did not differ by much. February showed some slightly larger differences, for example the Black/African American group consisted of 15.7% of the sample in February 2016 and 19.5% in February 2017, but small sample sizes, which have a larger effect on percentages, could explain the somewhat larger differences (a 5% difference in the Black/African American group represents about 5 candidates in February 2016). In addition, the school-based samples for July exams generally reflected the trend toward a smaller percentage of candidates in the Caucasian/White group that was observed in the reference sample, even though the Caucasian/White group was over-represented in the school-based sample.

While there were some differences observed in percentages of candidates representing racial/ethnic groups across the school-based sample and reference sample, the differences were not so large as to rule out the school-based sample as (a) providing useful information regarding group-level performance and (b) illustrating trends across exams before and after UBE adoption. However, the school-based samples in February resulted in sample sizes that were relatively small for some racial/ethnic groups and it would not be surprising for this to contribute instability in summary statistics like the percentages observed but also statistics like means for bar exam scores or background characteristics.[8]

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[8] For reference purposes, Appendix B contains counts and percentages of candidates by gender and race/ethnicity in the school-based sample and reference sample.

Table 2.3.4
Numbers and Percentages of Candidates in July
School-based Sample and Reference Sample
Race/Ethnicity

		July 2015		July 2016		July 2017	
		School-based Sample	Reference Sample	School-based Sample	Reference Sample	School-based Sample	Reference Sample
Caucasian/White	%	67.5%	61.7%	65.3%	59.4%	63.6%	57.3%
	(n)	(1407)	(4633)	(2953)	(4333)	(2388)	(3882)
Asian/Pacific Islander	%	11.3%	14.0%	12.7%	14.7%	14.3%	15.6%
	(n)	(235)	(1050)	(575)	(1074)	(538)	(1054)
Black/African American	%	8.7%	9.0%	8.3%	9.4%	8.2%	10.7%
	(n)	(182)	(678)	(374)	(687)	(307)	(727)
Hispanic/Latino	%	5.0%	5.0%	5.9%	5.8%	5.7%	5.7%
	(n)	(104)	(377)	(266)	(425)	(214)	(385)
Puerto Rican	%	1.3%	1.5%	1.7%	1.8%	1.2%	1.6%
	(n)	(27)	(114)	(76)	(132)	(44)	(106)
Chicano/Mexican American	%	0.6%	0.7%	0.5%	0.6%	0.5%	0.5%
	(n)	(12)	(51)	(24)	(47)	(20)	(35)
American Indian/Alaskan Native	%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%
	(n)	(1)	(9)	(6)	(8)	(5)	(9)
Other	%	3.5%	4.1%	3.9%	4.7%	4.0%	4.7%
	(n)	(73)	(308)	(176)	(341)	(151)	(319)
Omitted	%	2.1%	3.9%	1.5%	3.4%	2.3%	3.8%
	(n)	(43)	(293)	(70)	(245)	(86)	(259)
All	(n)	(2084)	(7513)	(4520)	(7292)	(3753)	(6776)

We don't want to get ahead of ourselves in analyzing bar exam results, but comparing Multistate Bar Examination (MBE) scores, specifically MBE means and standard deviations, was helpful to do here in order to compare the school-based sample to the reference sample. A major advantage of the MBE is that it is a consistent measurement instrument that was administered as part of the bar exam in New York before and after UBE adoption.[9] MBE scores can be compared across samples and across time to identify trends and consider the implications for candidate performance on the same measure. But, here we wanted to compare MBE performance between the school-based sample and reference sample of all domestic-educated

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[9] It did contribute differently to total bar exam scores (40% before UBE and 50% for UBE), but we are solely considering average scores on the MBE here.

candidates in the NYSBLE sample to identify the extent to which MBE scores in the school-based sample were comparable to those of the reference sample. As will become apparent, mean MBE performance differed somewhat between the samples, which we suggest as an indicator to use caution when considering the school-based sample as a proxy for all domestic-educated candidates in New York, particularly for February exams.

For February exams by gender, the school-based sample average MBE scores were lower and the standard deviations were smaller compared to the reference sample (see Table 2.3.5). The February 2016 MBE scores were particularly lower compared to February 2017, with overall differences in means of 4.73 (versus 3.29 for February 2017). Females also had a lower average MBE score in the school-based sample compared to the reference group for February 2016 (4.64 points lower); the February 2017 average MBE score in the school-based sample was 2.19 points lower than the reference group.

For July exams by gender, the school-based sample mean MBE scores were higher than and the standard deviations were fairly close to (generally within about a point) the reference sample for females, males, and all candidates (see Table 2.3.6). Differences in average MBE scores between school-based and reference samples tended to be in the 1- to 2-point range for July 2015 and July 2016 and roughly 3 points for July 2017.

Table 2.3.5
Mean and Standard Deviation of MBE Scores in February
School-based Sample and Reference Sample
Gender

		February 2016		February 2017	
		School-based Sample	Reference Sample	School-based Sample	Reference Sample
Female	Mean	126.89	131.53	129.94	132.13
	(SD)	(10.29)	(13.93)	(10.88)	(13.86)
	n	265	1159	393	1279
Male	Mean	130.04	134.87	129.91	134.63
	(SD)	(11.82)	(14.85)	(12.06)	(14.94)
	n	265	1128	329	1042
All*	Mean	128.45	133.18	129.95	133.24
	(SD)	(11.19)	(14.53)	(11.43)	(14.44)
	n	534	2346	723	2370

*All includes those omitting their gender.

Table 2.3.6
Mean and Standard Deviation of MBE Scores in July
School-based Sample and Reference Sample
Gender

		July 2015		July 2016		July 2017	
		School-based Sample	Reference Sample	School-based Sample	Reference Sample	School-based Sample	Reference Sample
Female	Mean	140.36	139.46	142.53	140.93	146.53	143.35
	(SD)	(16.09)	(15.37)	(15.73)	(16.18)	(15.81)	(16.90)
	n	1037	3621	2223	3609	1844	3436
Male	Mean	145.10	143.94	147.59	145.72	149.80	147.13
	(SD)	(16.21)	(16.08)	(15.83)	(16.49)	(15.98)	(16.86)
	n	1027	3725	2266	3552	1880	3211
All*	Mean	142.75	141.71	145.10	143.27	148.19	145.19
	(SD)	(16.30)	(15.89)	(15.96)	(16.52)	(15.97)	(16.99)
	n	2084	7513	4520	7292	3753	6776

* All includes candidates omitting their gender.

Table 2.3.7 contains the means and standard deviations of February MBE scores for the school-based sample and reference sample by race/ethnicity.[10] Similar to gender, the means for the school-based sample for each racial/ethnic group were lower than the reference sample and for each group the differences were larger for February 2016 (1.41 points to 6.36 points) compared to February 2017 (0.33 points to 5.46 points). The February school-based sample MBE scores were lower than the reference sample, and particularly lower in February 2016.

Table 2.3.8 contains the means and standard deviations of July MBE scores for the school-based sample and reference sample by race/ethnicity. Average MBE scores were generally higher for the school-based sample, except for a couple of groups (Asian/Pacific Islander and Hispanic/Latino) in July 2015. July 2017 average MBE scores tended to be higher than July 2015 or July 2016. So, in general, the July school-based sample average MBE scores tended to be higher than the reference sample.

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[10] For the remainder of this study, Caucasian/White, Asian/Pacific Islander, Black/African American, and Hispanic/Latino groups are the only groups included in analysis by race/ethnicity because of small sample sizes for other groups. The total, or "All", group includes all racial/ethnic groups and those omitting race/ethnicity. At a number of points later in the study, there are appendices that provide information for groups not included in the tables and figures in this study for readers that are curious and willing to use care when reviewing results for groups with relative small numbers of candidates.

The MBE results showed that the school-based sample performance differed somewhat from the reference sample of all domestic-educated candidates in the NYSBLE sample.[11] Differences tended to be larger in February, particularly February 2016. This suggests that we should be cautious, particularly with February, when considering the school-based sample as representative of the domestic-educated NYSBLE sample. As we will see in subsequent sections of this study, February results for the school-based sample appeared to be less stable and less consistent than the July results.

Table 2.3.7
Mean and Standard Deviation of MBE Scores in February
School-based Sample and Reference Sample
Race/Ethnicity

		February 2016		February 2017	
		School-based Sample	Reference Sample	School-based Sample	Reference Sample
Caucasian/White	Mean	129.92	136.28	130.08	135.54
	(SD)	(11.13)	(14.62)	(11.47)	(14.96)
	n	264	1115	347	1137
Asian/Pacific Islander	Mean	126.62	131.16	130.02	131.89
	(SD)	(11.73)	(14.38)	(11.56)	(12.83)
	n	85	363	110	337
Black/African American	Mean	126.34	127.75	128.22	128.55
	(SD)	(11.26)	(12.96)	(11.25)	(13.14)
	n	84	366	141	423
Hispanic/Latino	Mean	129.04	132.89	132.58	132.67
	(SD)	(12.17)	(12.95)	(11.80)	(13.28)
	n	44	154	66	187
All*	Mean	128.45	133.18	129.95	133.24
	(SD)	(11.19)	(14.53)	(11.43)	(14.44)
	n	534	2346	723	2370

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

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[11] While not described here, Appendix C contains means and standard deviations of MBE scores by gender and race/ethnicity for the school-based sample and reference sample.

Table 2.3.8
Mean and Standard Deviation of MBE Scores in July
School-based Sample and Reference Sample
Race/Ethnicity

		July 2015		July 2016		July 2017	
		School-based Sample	Reference Sample	School-based Sample	Reference Sample	School-based Sample	Reference Sample
Caucasian/White	Mean	145.68	144.99	147.77	146.52	150.66	148.58
	(SD)	(15.89)	(15.25)	(15.61)	(16.06)	(15.55)	(16.40)
	n	1407	4633	2953	4333	2388	3882
Asian/Pacific Islander	Mean	138.27	138.58	143.02	141.44	146.38	143.88
	(SD)	(15.76)	(15.28)	(14.88)	(15.66)	(15.81)	(16.91)
	n	235	1050	575	1074	538	1054
Black/African American	Mean	133.06	131.36	133.93	133.02	139.09	134.95
	(SD)	(14.28)	(14.06)	(14.61)	(14.97)	(15.16)	(15.38)
	n	182	678	374	687	307	727
Hispanic/Latino	Mean	135.19	135.98	140.13	138.82	141.24	139.30
	(SD)	(15.97)	(15.16)	(14.78)	(15.48)	(14.58)	(15.10)
	n	104	377	266	425	214	385
All*	Mean	142.75	141.71	145.10	143.27	148.19	145.19
	(SD)	(16.30)	(15.89)	(15.96)	(16.52)	(15.97)	(16.99)
	n	2084	7513	4520	7292	3753	6776

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

2.4 Adjustments to Data

2.4.1 Scaling Law School GPAs

The use of GPAs from different schools is always somewhat problematic, because the meaning of GPAs is likely to vary across schools as a result of differences in admissions policies, course requirements, grading standards, and the specific methods used to compute GPAs. In addition, the possible numeric values used for grades may vary across schools such that one school may use a 4-point scale (that takes values between 0 and 4) and another school may use a 100-point scale (that takes values between 0 and 100). The use of such widely different scales for the same variable within a single statistical analysis would make any results

impossible to interpret in a sensible way. Some rescaling of the GPAs within schools was essential for using LGPAs in analysis across different schools.

The UGPAs are subject to some of the same difficulties as LGPAs, particularly when UGPAs come from a variety of different undergraduate institutions and from a variety of different majors within institutions, which can reflect different levels of performance and even different kinds of performance. However, the UGPAs are from such a range of institutions and majors that any effects associated with institutions and majors can be effectively treated as sources of random noise. The variability introduced by differences among undergraduate schools (and majors within those schools) in grading standards and grading characteristics likely tends to diminish the power of the UGPA as a predictor of future performance, but it probably does not introduce any substantial systematic noise into the analyses. This problem as it pertains to LGPAs is not so easily resolved because a substantial proportion of the sample of domestic-educated candidates included in the school-based sample graduated from a relatively small number of law schools.

To address issues with LGPAs, we used two approaches to standardizing LGPAs. In the first approach, we adjusted for the selectivity of the law school in terms of UGPAs and LSAT scores. Specifically, for each unique candidate in the school-based sample, we computed an index based on an individual's LSAT score and UGPA. The UGPAs and LSAT scores in the school-based sample were scaled to have a mean of 0.0 and a standard deviation[12] (SD) of 1.0. Then, the two sets of scores were combined into an index, with the LSAT score given a weight of 60% and the UGPA given a weight of 40%. An arbitrary value of 10.0 was then added to the index to ensure that all values were positive. Each candidate in the school-based sample had a score on the index. The mean and standard deviation for the index was then computed for each law school in the school-based sample using the unique candidates in the school-based sample who had graduated from that law school, and the LGPAs for the candidates from that school were scaled to have the same mean and standard deviation as the index for the law school. The resulting *Index-based LGPA* depends on the candidate's actual law school GPA and the distribution of the index for candidates from his or her law school. Using this scaling of the GPA to the index implies that if two candidates from different law schools have the same LGPA, the candidate from the more selective school (i.e., with a higher average for the index) will generally have the higher Index-based LGPA.

In the second approach to scaling LGPAs, we transformed LGPAs within each law school to a common four-point scale, the *4-point LGPA*, by scaling the mean and standard deviation within each school to the average LGPA mean and standard deviation for all of the schools that used a traditional four-point GPA scale (which included most of the law schools in the sample). Under this definition, all of the law schools in the school-based sample had the same

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[12] The standard deviation is a statistic that summarizes the spread, or variation, in values of a variable.

mean and standard deviation for their GPAs. This approach makes no attempt to adjust the LGPAs to take account of differences in selectivity across law schools, and in fact, any differences in means and standard deviations of LGPAs that might have existed across schools were eliminated. The 4-point LGPA reflects each candidate's relative standing on GPA within their law school.

Candidates taking the bar exam repeatedly between July 2015 and July 2017 were counted once in the calculations of the index (for Index-based LGPA) and LGPA mean and standard deviation (for 4-pt LGPA) regardless of bar exam administration. The mean LGPA used in the scaling of 4-point LGPA was 3.34 and the standard deviation was 0.33.

2.4.2 Scaling Bar Exam Scores

The UBE consists of a written component (six MEEs and two MPTs, weighted 50% of the total score) and the MBE (weighted 50% of the total score). The written component is scaled to the MBE's 200-point scale such that scaled written scores also range from 0 to 200. The written scaled scores and MBE scaled scores are then added together to obtain an integer UBE scaled score that ranges from 0 to 400.

Prior to adopting the UBE, New York's bar exam consisted of a written component (five essays and one MPT, weighted 50% of the total score), the MBE (weighted 40% of the total score), and a New York multiple choice (NYMC) component (weighted 10% of the total score). The written component and the NYMC were each separately scaled to the MBE scale multiplied by five so that scores on each component and total bar exam scores ranged from 0 to 1,000. In contrast, UBE scaled scores are on the MBE scale (times 2) and the previous New York bar exam scores were on the MBE scale (times 5). Because a primary purpose of this study was to compare performance on the bar exam before and after UBE adoption, it was helpful to place the bar exam scores before and after UBE adoption on common footing, even though the exams were different and a portion of the analysis covered pass rates before and after UBE adoption. The current UBE scale of 0 to 400 was used throughout this study and the previous bar exam scores in New York based on the 1,000 point scale were divided by 2.5 so that the range of scores was similar to the UBE scale of 0 to 400.[13] This ensured that analysis using bar exam scores before and after UBE adoption used scores on a similar scale.[14] In addition, when

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[13] This was reasonable for purposes of this analysis because the components of the UBE and the components of the previous New York Bar Exam were scaled to the MBE. Even after placing the New York Bar Exam Scores on a similar-looking scale to the UBE, it is important to understand that the scores are not strictly interchangeable between UBE and New York Bar Exam because the exam components and weighting of components were different.

[14] It is possible to multiply the UBE scores by 2.5 to place them on a scale with a range similar to the previous New York Bar Exam scale. However, the 1,000 point scale is not currently being used, so we thought that this way of maintaining comparable bar exam scores would be less helpful for readers of this study

studying scaled components of the bar exam in the analysis, the MBE 0 to 200 scale was used. For example, the NYMC scaled scores and written scaled scores were divided by 5 so that instead of being on the original scale of 0 to 1,000 they ranged from 0 to 200.

2.5 Technical Notes[15]

2.5.1 Standard Errors in Group Mean Scores

We have tried to make this study as accessible as possible, but the accurate interpretation of many of the results in this study requires at least a general understanding of what is called the standard error of the mean (SEM). SEMs are intended to provide an indication of the uncertainty in an estimated mean or average score based on a sample from the population being analyzed. Standard errors provide an explicit caveat about the potential for over-interpreting small differences.

The formulas used to estimate standard errors are based on statistical sampling theory, and reflect the random variability associated with the sampling of individuals on any given test date. They do not include any systematic errors due to changes in the population over time.

The theory used to develop formulas for estimating the standard error is quite complicated, but the final result is fairly simple. The standard error in estimating the mean (or average) score for a group is equal to the standard deviation for the group over the square root of the sample size (i.e., the number of candidates), and therefore, as the sample size gets larger, the standard error of the mean (SEM) gradually gets smaller. The decrease in the standard error as the sample size increases is gradual because the SEM is inversely proportional to the square root of the sample size. As a result, in order to cut the SEM in half, the sample size has to be made four times as large. So, if the SEM is based on a sample of 100, the sample size would have to be increased to 400 to cut the SEM in half and to 1,600 to cut it by three quarters. A law of diminishing returns operates for standard errors, and the standard error never reaches zero.

Thus, the standard error for a group mean depends on the standard deviation within the group and the sample size for the group. For example, a typical standard deviation for bar exam scores for various groups vary somewhat (from about 20 to about 35), but the sample sizes vary much more (from a few individuals to sample sizes of over 6,000). Therefore, the sample size tends to be the dominant factor in determining the standard error.

Assuming a typical standard deviation of about 30, a sample size of 100 would yield a SEM of about 3 ($30/\sqrt{100} = 3$), and a sample size of 49 would yield a SEM of about 4.3 ($30/\sqrt{49}$

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[15] Portions of the text in this section were drawn from a previous study from 2006 that NCBE conducted for the New York State of Law Examiners.

≈ 4.3). For a sample size of 25, the SEM would be 6. As a rule of thumb, we will not place much emphasis on group means based on fewer than 100 candidates and even less emphasis on group means based on fewer than 50 candidates. We will generally not report group means for groups with fewer than 20 candidates. As the sample size gets small (e.g., below 20), the group mean says more about the particular individuals in the sample than it does about the group as a whole.

In subsequent sections, we report a range of SEMs represented by the bar exam administrations across Februarys and Julys. Because sample sizes tend to be smaller in February and larger in July, the larger SEMs are typically associated with February and the smaller SEMs with July. The specific SEM values can be calculated for a particular mean by dividing the standard deviation by the square root of the sample size.

2.5.2 Confidence Intervals

Confidence intervals are often used to indicate the uncertainty in a reported statistic. Assuming that the main source of uncertainty in a reported statistic is sampling variability, confidence intervals can be defined in terms of standard errors. In particular, a 68% confidence interval covers the range from one standard error below the mean, or average, to one standard error above the mean. It is called a "68% confidence interval" because such intervals are expected to include the true value of the mean about 68% of the time. Similarly, a 95% confidence interval includes the range from roughly two standard errors below the mean to roughly two standard errors above the mean and is expected to include the true value of the mean about 95% of the time.

Standard errors are reported in many of the tables in this study and can be used to construct approximate confidence intervals if the reader wishes to do so. Alternately, standard errors can be taken simply as cautionary notes not to over interpret relatively small differences (i.e., differences that are not much bigger than the standard errors involved in the comparison) in generalizing the results.

3. How Do Candidate Background Characteristics Compare across Bar Exam Administrations? How Do They Relate to Performance on the Bar Exam in New York Before and After UBE Adoption?

3.1 Overview

This section uses the school-based sample exclusively (see Section 2 for a detailed description and summary) to review background characteristics, specifically undergraduate grade point average (UGPA), Law School Admission Test (LSAT) scores, and law school grade point average (LGPA) of candidates taking the New York bar exam between July 2015 and July 2017. The school-based sample included a subset of domestic-educated candidates taking the bar exam in New York (a) agreeing to share their background information, (b) whose law school agreed to share their information with the New York State Board of Law Examiners (NYSBLE), (c) with non-missing UGPAs, LSAT scores, and LGPAs, and (d) from schools with 25 or more candidates represented (see Section 2.4 for an explanation of this requirement).

As described in Section 2.3, because candidate background information was provided voluntarily by candidates and schools, the available data in the school-based sample was not perfectly representative of the total group of domestic-educated candidates taking the bar exam in New York and we suggested caution when considering the school-based sample as representative of all domestic-educated candidates in the NYSBLE sample. However, despite these caveats, analysis in Section 2.3 showed that demographic characteristics and mean MBE scores did not differ dramatically from the total group of domestic-educated candidates, particularly for July exams. Where differences were observed in demographic characteristics or MBE scores between school-based sample and domestic-educated NYSBLE sample, the trends observed from bar exam to bar exam for the domestic-educated NYSBLE sample also tended to be observed in the school-based sample. For example, mean MBE score changes between July 2015 and July 2016 for the domestic-educated NYSBLE sample were also observed for the school-based sample. This was encouraging as a reasonableness check for using the school-based sample to study performance on candidate background characteristics and performance across bar exam administrations before and after UBE adoption, especially in light of the fact that the percentage of candidates represented in the school-based sample in February 2015 and July 2015 (before UBE adoption) was substantially lower than February 2016, July 2016, and July 2017 (after UBE adoption).

The school-based sample was used to address the following questions: *How do candidate background characteristics compare across bar exam administrations? How do they relate to performance on the bar exam in New York before and after UBE adoption?* Addressing these

questions will help contextualize performance on the bar exam before and after UBE adoption by identifying the extent to which domestic-educated candidate characteristics in the school-based sample may (or may not) have changed across bar exams, specifically after UBE adoption in July 2016. A change in bar exam performance for the group of candidates taking the New York bar exam may be associated with shifts in the characteristics of candidates taking the exam rather than to shifts in the exam itself. Below, we examine UGPAs, LSAT scores, and LGPAs (4-point LGPAs and Index-based LGPAs, see section 2.4) overall and by different groupings of candidates across bar exam administrations and relate these background candidate characteristics to bar exam performance. The analysis in this section is descriptive in nature and provides means, standard deviations, and standard error of the means statistics along with figures that display distributions of scores[16] for domestic-educated candidates in the school-based sample overall and first-time takers only.

The section 3.2 summarizes candidate performance on background characteristics for the entire school-based sample and first-time takers only. Then, sections 3.3 and 3.4 present analysis of background characteristics with breakdowns of performance by gender and race/ethnicity[17] for the entire school-based sample and first-time takers only to explore how candidate background characteristics compare across bar exams for different groupings of candidates.[18] Sections 3.5, 3.6, and 3.7 relate performance on background characteristics to bar exam scores and pass rates.

The analysis in the remainder of section 3 shows that candidate background characteristics in the form of undergraduate grade point averages (UGPAs), Law School Admission Test (LSAT) scores,[19] and law school grade point averages (LGPAs) were not stationary and did shift across New York bar exam administrations before and after UBE adoption in July 2016. Background characteristics differed by gender and race/ethnicity. Also, background characteristics were positively related to performance on the bar exam; as performance on background characteristics increased, so did bar exam performance (and pass rates). After taking into consideration background characteristics, bar exam performance (and

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[16] Distributions are presented in distribution plots in some cases and boxplots in others. An explanation of each type of plot is included the first time the plot is introduced.

[17] Breakdowns by gender and race/ethnicity are provided in Appendix D. For statistical modeling of background characteristics, see Section 7 and Appendix O.

[18] Groups with relatively few candidates, specifically Puerto Rican, Chicano/Mexican American, and American Indian/Alaskan Native, were not included in the analysis of the school-based sample because statistics like means were rather unstable and samples with few candidates say more about the individuals included in the group than about the group. The "Other" and "Omitted" groups were also excluded because these groups refer to less clearly defined groups, likely those with another preferred designation, or to a multi-racial/ethnic background, or those choosing not to provide their race/ethnicity. Appendix E contains analysis for these excluded groups where the sample sizes were at least 10, although extreme caution is needed not to draw firm conclusions from the results, particularly when the results are based on very small sample sizes (less than, say, 20) because they are likely to be rather unstable.

[19] Additional analysis of LSAT scores using all valid scores for domestic-educated candidates is provided in Appendix F.

pass rate) still showed differences across bar exam administration, with scores being higher, on average, for more recent bar exams.

The results throughout section 3 indicated that background characteristics are critical to consider when interpreting fluctuations in bar exam performance across administrations, specifically before and after UBE adoption in New York. We don't have data to indicate precisely why background characteristics shifted, only that they did. It is possible that the shifts had nothing to do with UBE adoption or it could be that the candidates choosing to test in New York shifted because of UBE adoption, or perhaps the explanation is a bit of both. Or, as mentioned earlier, it may be that the representativeness of the school-based sample was different in the period before UBE adoption versus after UBE adoption. Regardless of the explanation, there were shifts in background characteristics for the school-based sample across February 2016 and February 2017 bar exams and across July 2015, July 2016, and July 2017 bar exams for the school-based sample. There were also concurrent shifts in bar exam performance that tended to follow the shifts in background characteristics.

The observed positive relationships between background characteristics and bar exam performance were consistent with prior research. Specifically, LGPA had the strongest relationship with bar exam scores, followed by LSAT scores and UGPAs.

3.2 Performance on Background Characteristics

For candidates in the school-based sample, background characteristics showed some differences across bar exam administration. Table 3.2.1 displays the means and standard deviations[20] of background characteristics for the entire school-based sample. Each of the background characteristics for February candidates had lower averages than those of July candidates, which is consistent with the fact that the majority of the February group consisted of repeat test takers who had not passed on a previous attempt and that, on average, tend to have lower bar exam scores than first-time takers. UGPA averages were comparable across July 2015 and July 2016 before increasing slightly in July 2017 (by .05 UGPA points). February UGPAs were comparable at 3.18. LSAT averages showed a slight decrease between February 2016 and February 2017 (153.30 – 153.08 = 0.22 points) and a slight decrease between July 2015 and July 2016 (159.93 – 159.68 = 0.25 points) before increasing to 160.65 in July 2017. 4-point LGPA averages[21] showed slight increases between February 2016 (3.02) and February 2017 (3.03), were the same in July 2015 and July 2016 (3.32) but increased slightly in July 2017 (3.33).

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[20] The standard deviation is a statistic that summarizes the spread, or variation, in values of a variable.
[21] Recall that the 4-point LGPA does not account for law school selectivity and places law school GPAs for candidates within each school onto a 4-point scale.

Index-based LGPA averages[22] increased between February 2016 (8.89) and February 2017 (8.99) and increased across July 2015 (9.82), July 2016 (9.90), and July 2017 (10.06).

First-time takers in the school-based sample also showed some differences in background characteristics. Table 3.2.2 provides the means and standard deviations for first-time takers. UGPA averages increased between February 2016 (3.10) and February 2017 (3.21) and were the same between July 2015 and July 2016 (3.46) before increasing in July 2017 (3.52). The average LSAT score increased between February 2016 (153.64) and February 2017 (155.33) and decreased between July 2015 (160.78) and July 2016 (160.40) before increasing in July 2017 (161.48). The average 4-point LGPA increased between February 2016 (3.00) and February 2017 (3.07) and was the same between July 2015 and July 2016 (3.35) before increasing slightly in July 2017 (3.37). The average Index-based LGPA increased between February 2016 (8.90) and February 2017 (9.26) and increased between July 2015 (9.95), July 2016 (10.03), and July 2017 (10.18).

The general patterns of shifts in averages were similar for July candidates in the entire school-based sample compared to first-time takers only but not for February candidates in the entire school-based sample compared to first-time takers only. One important issue to keep in mind that may have contributed to the different patterns observed in February for the entire school-based sample versus first-time takers only was that a relatively small proportion of candidates in February were first-time takers (less than 20%), which may have led to larger fluctuations in background performance of the groups of first-time takers testing in February from exam to exam. Specifically, the first-time taker sample sizes in February were quite a bit smaller than July, which may have contributed to seeing less stable averages. In addition, and counterintuitive, was the fact that February 2016 first-time takers had lower average UGPAs (3.10) than all candidates in the school-based sample (3.18). Typically, first-time takers tend to perform better on than repeat takers, but that was not the case in February 2016.

Focusing specifically on the July exams, between July 2015 and July 2016 (i.e., before and after UBE adoption), (a) average LSAT score declined slightly, (b) average Index-based LGPA increased slightly, and (c) average UGPA and 4-point LGPA did not change. Then, in July 2017 the averages for all four background characteristics increased. Average performance on background characteristics shifted before and after UBE adoption.

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[22] Recall that the Index-based LGPA adjusts for law school selectivity by accounting for the average UGPA and LSAT score at each school. More selective schools will tend to have higher Index-based LGPAs than less selective schools.

Table 3.2.1
Background Characteristics Means and Standard Deviations
School-based Sample

		February 2016 (N = 534)	February 2017 (N = 723)	July 2015 (N = 2084)	July 2016 (N = 4520)	July 2017 (N = 3753)
UGPA	Mean	3.18	3.18	3.43	3.43	3.48
(SEM < 0.05)	(SD)	(0.43)	(0.43)	(0.40)	(0.39)	(0.38)
LSAT	Mean	153.30	153.08	159.93	159.68	160.65
(SEM 0.1 to 0.3)	(SD)	(7.37)	(7.08)	(8.79)	(8.40)	(8.65)
4-point LGPA	Mean	3.02	3.03	3.32	3.32	3.33
(SEM < 0.05)	(SD)	(0.29)	(0.29)	(0.34)	(0.33)	(0.34)
Index-based LGPA	Mean	8.89	8.99	9.82	9.90	10.06
(SEM < 0.05)	(SD)	(0.61)	(0.62)	(0.92)	(0.86)	(0.87)

Table 3.2.2
Background Characteristics Means and Standard Deviations
School-based Sample First-time Takers

		February 2016 (N = 85)	February 2017 (N = 92)	July 2015 (N = 1873)	July 2016 (N = 4070)	July 2017 (N = 3405)
UGPA	Mean	3.10	3.21	3.46	3.46	3.52
(SEM < 0.05)	(SD)	(0.40)	(0.42)	(0.38)	(0.38)	(0.35)
LSAT	Mean	153.64	155.33	160.78	160.40	161.48
(SEM 0.1 to 0.9)	(SD)	(7.31)	(8.52)	(8.50)	(8.18)	(8.37)
4-point LGPA	Mean	3.00	3.07	3.35	3.35	3.37
(SEM < 0.05)	(SD)	(0.29)	(0.31)	(0.32)	(0.32)	(0.32)
Index-based LGPA	Mean	8.90	9.26	9.95	10.03	10.18
(SEM <= 0.1)	(SD)	(0.57)	(0.70)	(0.85)	(0.79)	(0.79)

Figures 3.2.1 to 3.2.8 display distributions of scores for each background characteristic broken down by bar exam administration for the school-based sample and first-time takers only in the school-based sample. These distributions[23] display the percentage of candidates scoring throughout the possible values of each background characteristic. For example, Figure 3.2.1 displays the distributions of UGPAs. The solid blue curve displays the distribution of UGPAs for February 2016. We can see that the largest percentage of candidates fell slightly above a UGPA of 3.25, which was slightly higher than the average UGPA of 3.1. The distributions provide a

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[23] Distribution plots have been statistically smoothed to make them easier to view and interpret.

more granular view of the data that was summarized by the means and standard deviations in the tables. We can visually compare the percentages of candidates falling throughout the full range of scores and compare shifts in the full range of performance across bar exam administrations.

Distribution plots can illustrate interesting patterns in variables. For example, for candidates taking the July bar exam in New York, the LSAT score distributions (Figure 3.2.3) were somewhat bimodal (i.e., they have two "humps") indicating that at two locations along the LSAT scores there tend to be relatively larger percentages of candidates. The distributions also illustrate that the February first-time taker distributions (Figures 3.2.2, 3.2.4, 3.2.6, 3.2.8) tended to be less consistent and have less similar distributions than the July first-time taker distributions or the distributions for the entire school-based sample (Figures 3.2.1, 3.2.3, 3.2.5, 3.2.7). In the patterns of distributions across bar exam administrations, we can see which administrations generally had higher values on a background characteristic by how much further to the right the distribution falls compared to other distributions in the same plot (i.e., July 2017). We have included these distributions here to provide the curious reader with additional detail; however, for purposes of comparing candidate performance on background characteristics, the distributions of scores generally reiterate the patterns observed in the tables of means and standard deviations.[24]

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[24] One exception to point out is with LSAT scores for the entire school-based sample compared to first-time takers. The mean LSAT score was 153.30 for the entire school-based sample and 153.64 for the first-time takers. If we compare the distributions of LSAT scores between the school-based sample and first-time takers (blue curves in Figure 3.2.3 and Figure 3.2.4), we can see that the first-time taker curve is slightly to the left and has a slight "second hump" near a score of 170 compared to the entire school-based sample. So, while the average LSAT score was higher for first-time takers in February 2016 (likely due to the "second hump" at scores of 170), the distribution of scores indicates that a big group of candidate LSAT scores may actually be lower. This observation highlights a limitation in using means to summarize scores when the shape of distributions of scores shifts (keep in mind that the distributions for February first-time takers were based on relatively few candidates). We will return to this pattern below when reviewing bar exam performance for these groups.

Figure 3.2.1
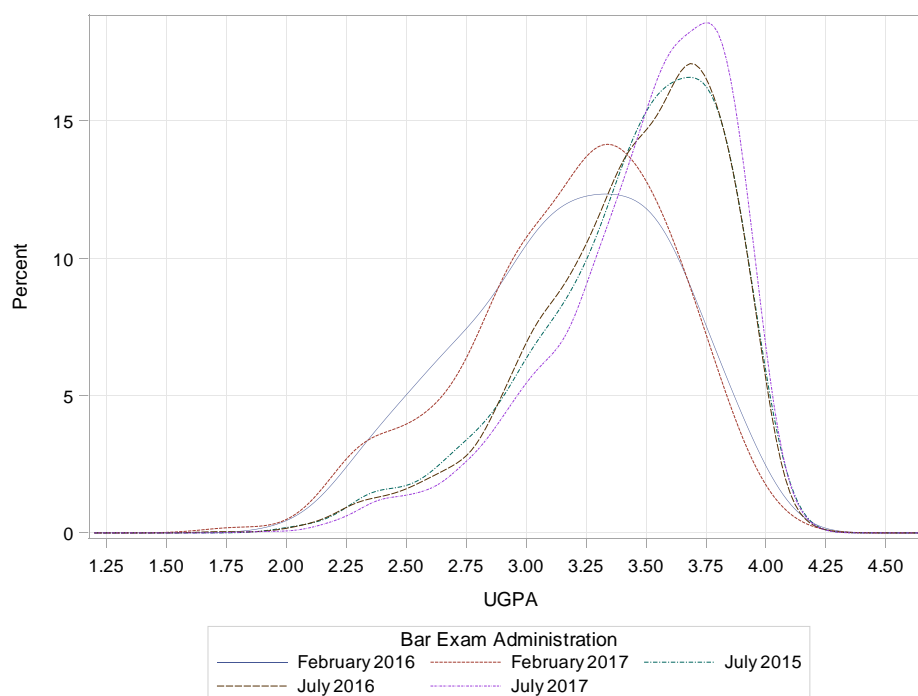**Distribution of UGPAs by Bar Exam**
School-based Sample

Figure 3.2.2
Distribution of UGPAs by Bar Exam
School-based Sample First-time Takers
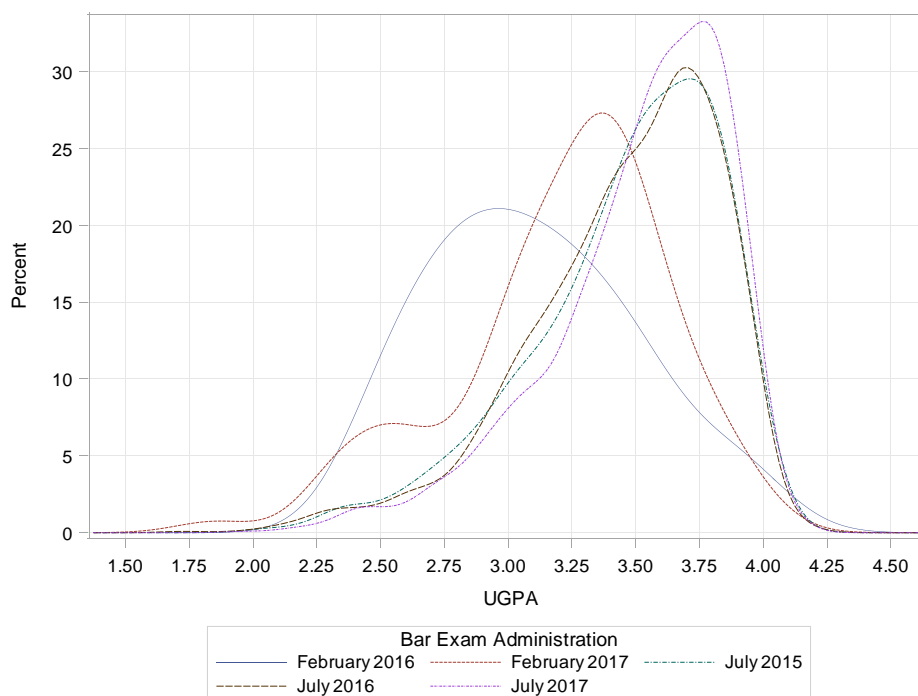
Figure 3.2.3
Distribution of LSAT Scores by Bar Exam
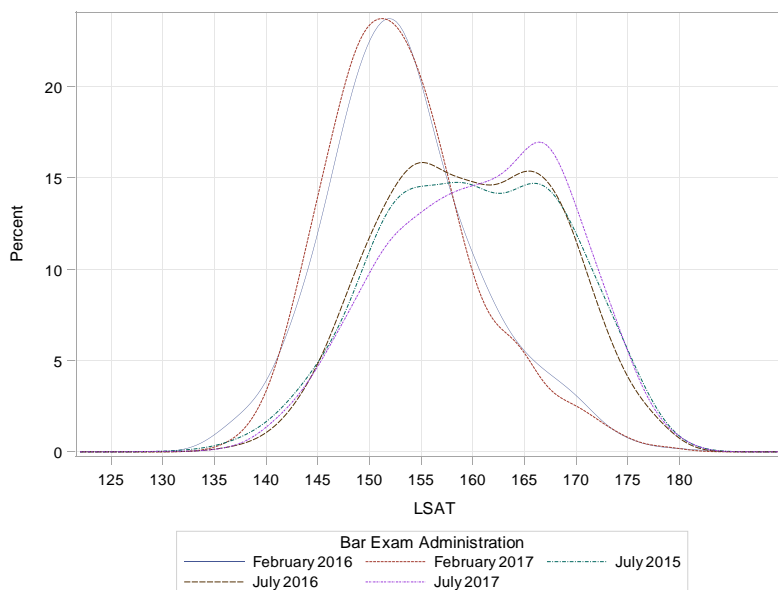**School-based Sample**

Figure 3.2.4
Distribution of LSAT Scores by Bar Exam
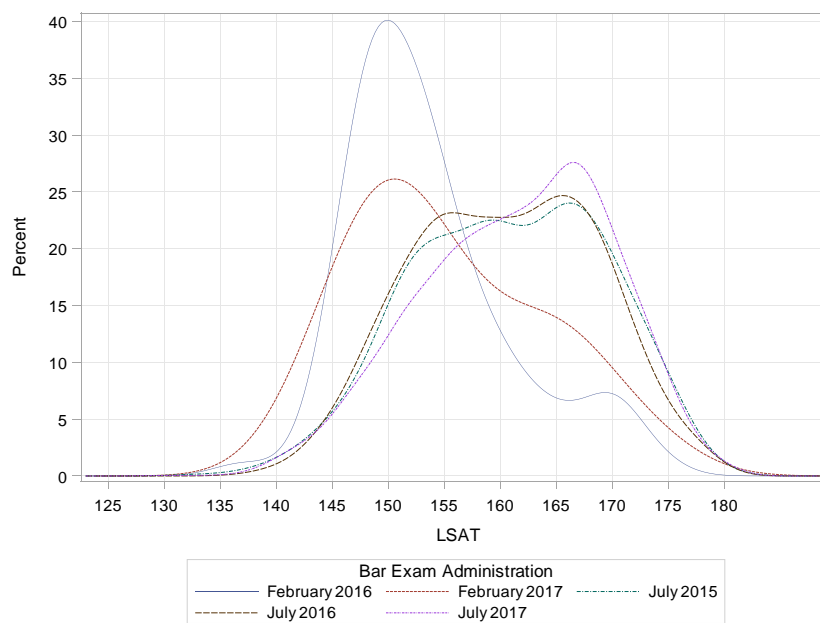**School-based Sample First-time Takers**

Figure 3.2.5
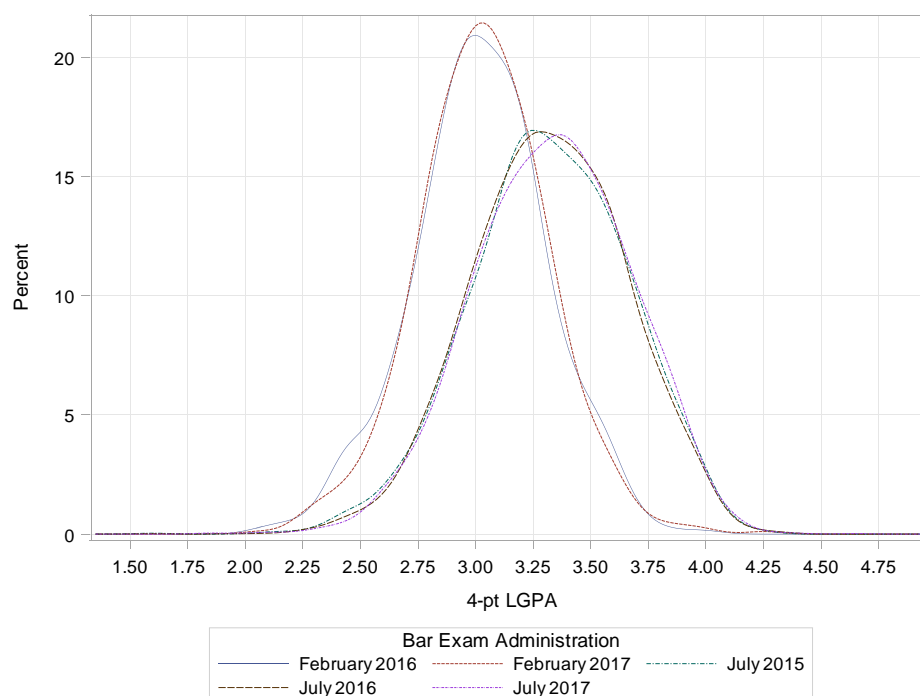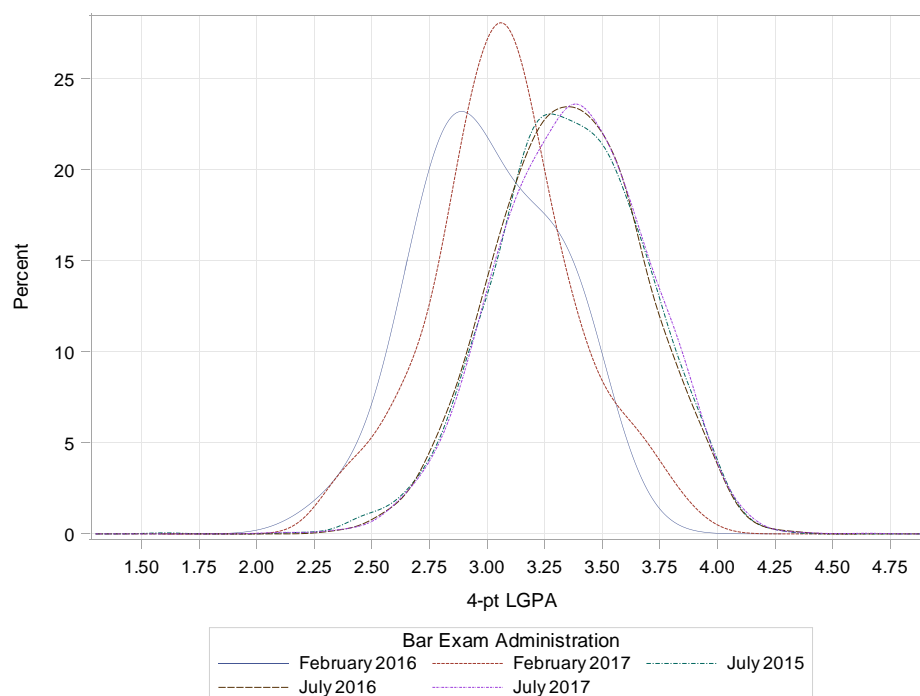**Distribution of 4-point LGPA by Bar Exam**
School-based Sample

Figure 3.2.6
Distribution of 4-point LGPA by Bar Exam
School-based Sample First-time Takers

Figure 3.2.7
Distribution of Index-based LGPA by Bar Exam
School-based Sample
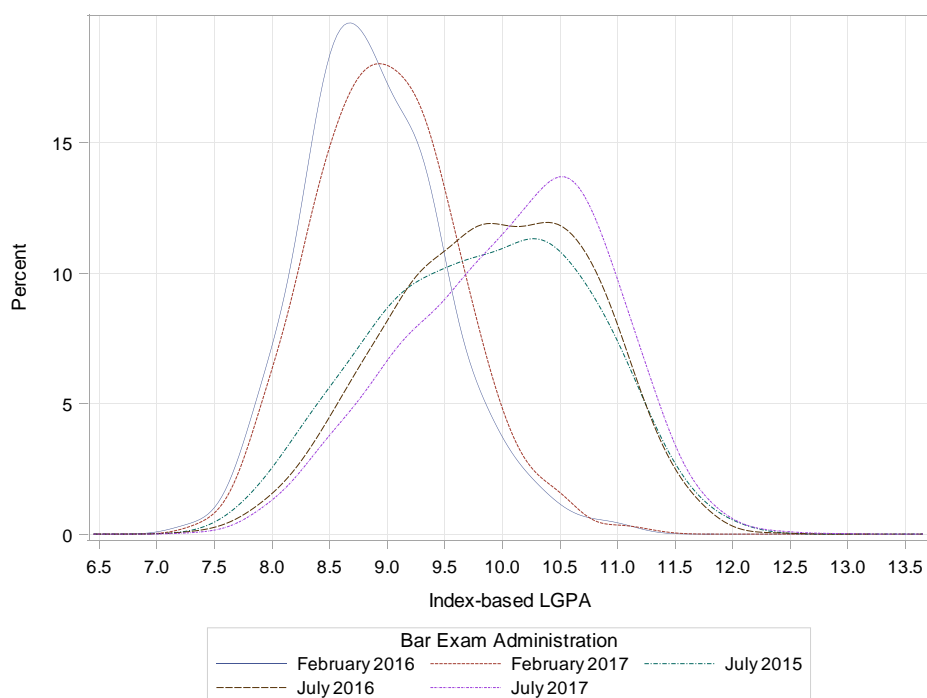
Figure 3.2.8
Distribution of Index-based LGPA by Bar Exam
School-based Sample First-time Takers
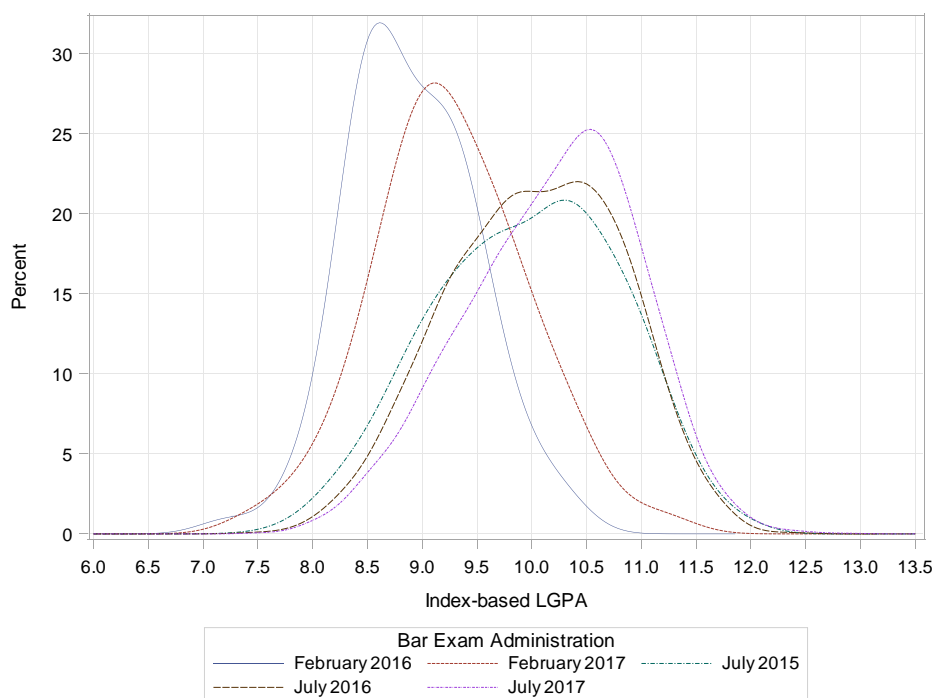
3.3 Performance on Background Characteristics by Gender

Candidate performance on UGPA, LSAT, 4-point LGPA, and Index-based LGPA background characteristics by gender for the entire school-based sample and first-time takers in the school-based sample between July 2015 and July 2017 bar exam administrations are provided in this section. Candidates omitting their gender were excluded as a separate category from the analysis because there were too few candidates in this group to obtain reliable statistics for the group. However, parts of the analysis below contain an overall ("All") category that includes females, males, and omitted candidates in the calculations. Analysis of each background characteristic includes (a) a table of means (averages) and standard deviations (spread in scores) along with sample sizes and standard errors of the mean (statistical uncertainty in the mean), (b) a figure with boxplots by gender at each bar exam (described in more detail below), and (c) a figure with means at each bar exam by gender (to illustrate trends across groups and bar exams).

Table 3.3.1 contains the means and standard deviations of UGPA by gender. Females at each bar exam administration had higher average UGPAs than males. This pattern was consistent across candidates taking July exams before and after UBE adoption. Specifically, the difference in means between females and males was 0.08 for July 2015 and July 2016 and 0.07 in July 2017. The pattern of average UGPAs diverges slightly for February 2017 compared to February 2016, with the difference in means between females and males increasing slightly from 0.10 to 0.13. The standard deviation was slightly larger for males than females at each bar exam administration.

The patterns of UGPAs across candidates taking the New York bar exam at each administration by gender are also presented in Figure 3.3.1 and 3.3.2. Figure 3.3.1 contains boxplots[25] that display for each bar exam administration by gender a summary of the average UGPA (indicated by a "+" or "x") connected by a line across bar exams to illustrate the trend in average UGPAs. The top and bottom of each box indicates the 25th percentile (bottom of the box) and 75th percentile (top of the box) of UGPA. The highest and lowest values terminating the vertical lines extending above and below the box (often referred to as whiskers) indicate the minimum (lowest) and maximum (highest) UGPA observed. Boxplots provide a way of concisely summarizing distributions for purposes of comparing groupings. Using the boxplots, we can see that females had higher average UGPAs than males for the bar exam administrations listed. In addition, we can see that the spread in UGPAs (as captured by the width of the boxes indicating 25th percentile and 75th percentile UGPAs) was larger for males than for females (particularly for February 2016). Figure 3.3.2 displays the average UGPA at each bar exam by gender connected by a line that illustrates the patterns in averages across bar exam administration by gender. Figure 3.3.2 also contains the overall means (All) for reference, which fall between the female and male means. Figure 3.3.2 illustrates the differences in average UGPAs between

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[25] These plots are also sometimes referred to as box-and-whisker plots.

females and males and that, for example, the shifts in average UGPAs across bar exams in July were similar for both groups because the distance between plotted averages by group remained similar even though the averages of each group across bar exams were similar or increased.

Table 3.3.1
UGPA Means and Standard Deviations
School-based Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	3.23	3.24	3.47	3.47	3.52
	(SD)	(0.41)	(0.40)	(0.37)	(0.37)	(0.34)
	N	265	393	1037	2223	1844
Male	Mean	3.13	3.11	3.39	3.39	3.45
	(SD)	(0.44)	(0.44)	(0.42)	(0.41)	(0.40)
	N	265	329	1027	2266	1880
All*	Mean	3.18	3.18	3.43	3.43	3.48
	(SD)	(0.43)	(0.43)	(0.40)	(0.39)	(0.38)
	N	534	723	2084	4520	3753

* All includes candidates omitting their gender.
SEM < 0.05

Figure 3.3.1
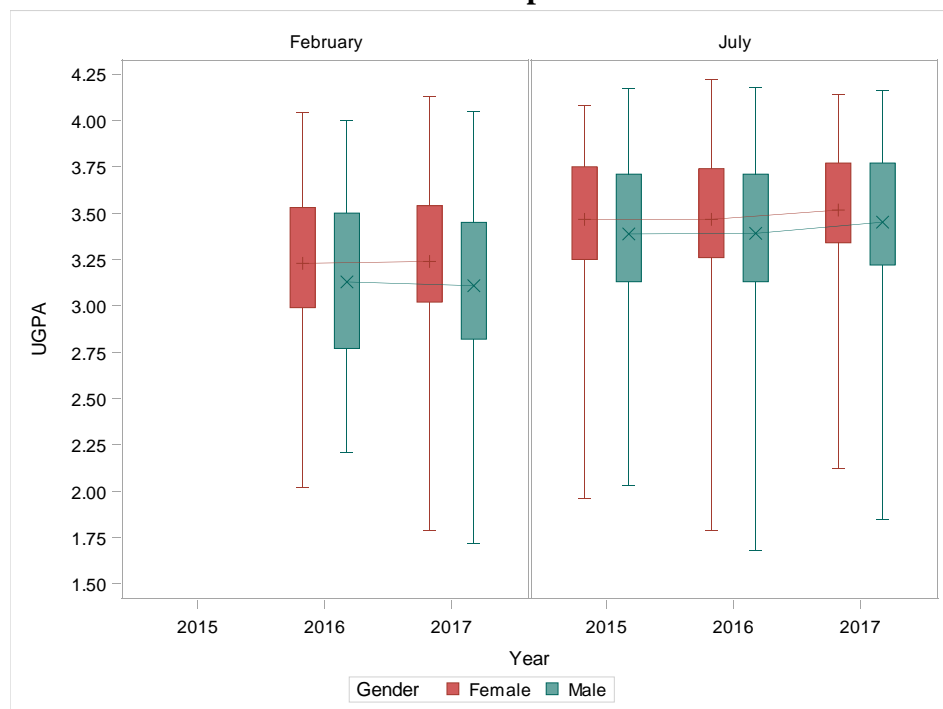**Boxplots of UGPA**
School-based Sample: Gender

Figure 3.3.2
Mean UGPA
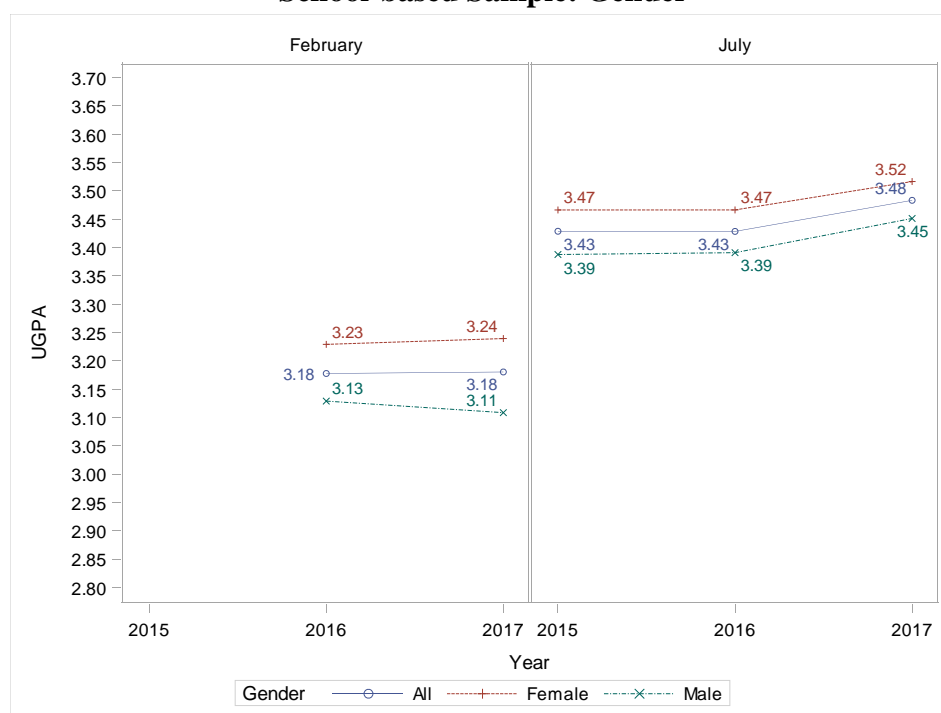**School-based Sample: Gender**

Table 3.3.2 contains the means and standard deviations of UGPAs by gender for first-time takers. With the exception of candidates in February 2016, females had higher average UGPAs than males. In February 2016, males had a slightly higher average UGPA (3.11) compared to females (3.10). Also, with the exception of February 2016, first-time takers had higher average UGPAs than all candidates in the school-based sample (Table 3.3.1). It was unusual that first-time takers in February 2016 had lower average UGPAs than all candidates because first-time takers typically have higher performance as a group. However, the sample sizes were small for first-time takers which may have contributed to a certain degree of instability in means and, as described in section 2, February results in the school-based sample may not well represent domestic-educated candidates in New York. In other words, we should use caution in interpreting the results from the school-based sample in February, especially for February 2016 first-time takers. Boxplots and plots of mean UGPAs across bar exam administration by gender are presented in Figures 3.3.3 and 3.3.4.

Table 3.3.2
UGPA Means and Standard Deviations
School-based Sample First-time Takers: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	3.10	3.27	3.50	3.50	3.55
(SEM <=0.1)	(SD)	(0.41)	(0.40)	(0.35)	(0.35)	(0.32)
	N	37	44	925	2004	1678
Male	Mean	3.11	3.16	3.43	3.42	3.49
(SEM <=0.1)	(SD)	(0.40)	(0.44)	(0.39)	(0.40)	(0.38)
	N	47	48	929	2038	1700
All*	Mean	3.10	3.21	3.46	3.46	3.52
(SEM < 0.05)	(SD)	(0.40)	(0.42)	(0.38)	(0.38)	(0.35)
	N	85	92	1873	4070	3405

* All includes candidates omitting their gender.

Figure 3.3.3
Boxplots of UGPA
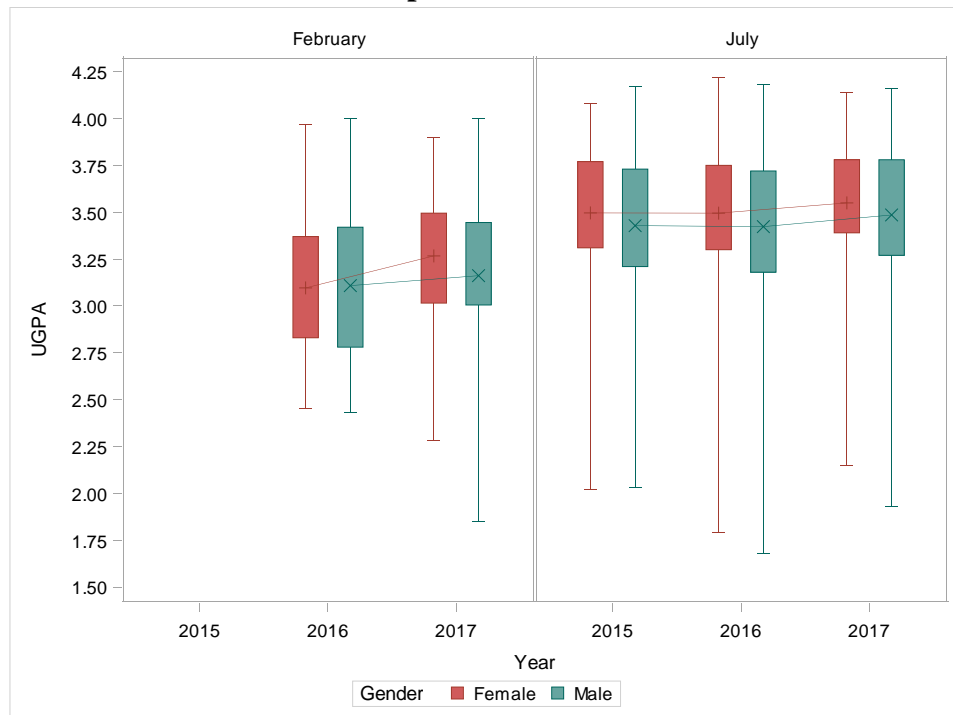**School-based Sample First-time Takers: Gender**

Figure 3.3.4
Means of UGPA
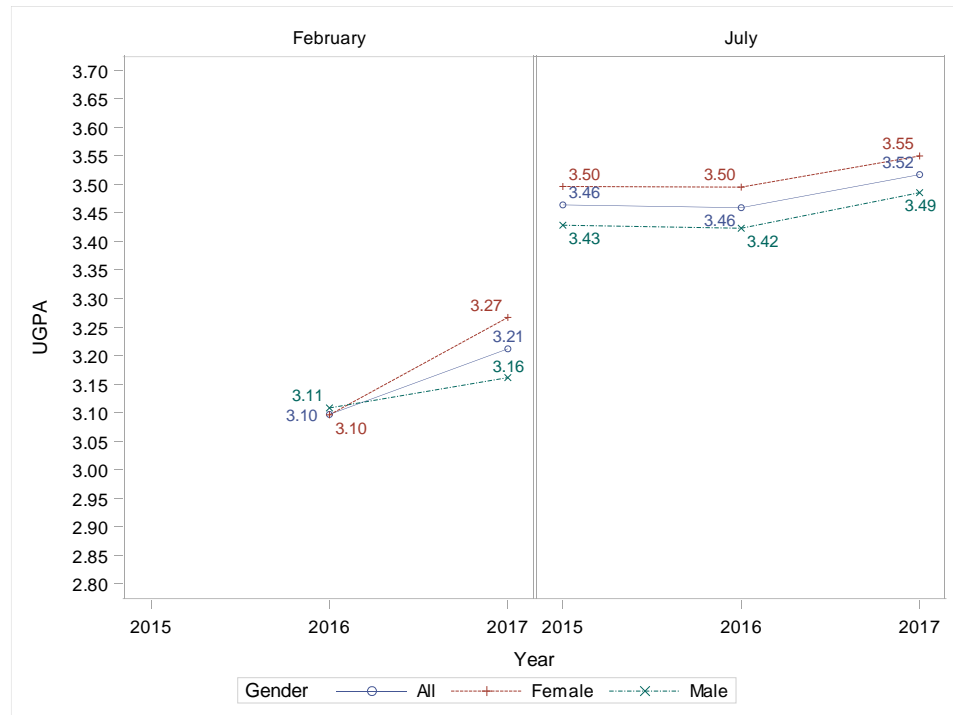**School-based Sample First-time Takers: Gender**

Table 3.3.3 lists the means and standard deviations of LSAT scores by gender for the entire school-based sample. Males had higher average LSAT scores than females at each bar exam administration. The difference in average LSAT scores between males and females decreased across candidates taking July exams before and after UBE adoption. Specifically, the difference in means between females and males was 2.45 in July 2015, 1.85 in July 2016 and 1.48 in July 2017. The difference in means also decreased across February 2016 (2.18) and February 2017 (1.98). The standard deviation was larger for males than females at each bar exam administration. The average LSAT scores for males decreased (0.59 points) between July 2015 and July 2016 before recovering and increasing slightly in July 2017 (0.23 points compared to July 2015). The average LSAT scores for females increased by 0.01 points between July 2015 and July 2016 and then increased again in July 2017 (1.19 points). Figures 3.3.5 and 3.3.6 display the boxplots and mean plots for LSAT scores across bar exam administrations by gender, which illustrates the patterns of LSAT performance by gender across bar exams.

Table 3.3.3
LSAT Means and Standard Deviations
School-based Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	152.25	152.16	158.71	158.72	159.91
(SEM 0.2 to 0.4)	(SD)	(6.70)	(6.97)	(8.67)	(8.28)	(8.54)
	N	265	393	1037	2223	1844
Male	Mean	154.43	154.14	161.16	160.57	161.39
(SEM 0.2 to 0.5)	(SD)	(7.80)	(7.06)	(8.74)	(8.40)	(8.67)
	N	265	329	1027	2266	1880
All*	Mean	153.30	153.08	159.93	159.68	160.65
(SEM 0.1 to 0.3)	(SD)	(7.37)	(7.08)	(8.79)	(8.40)	(8.65)
	N	534	723	2084	4520	3753

* All includes candidates omitting their gender.

Figure 3.3.5
Boxplots of LSAT Scores
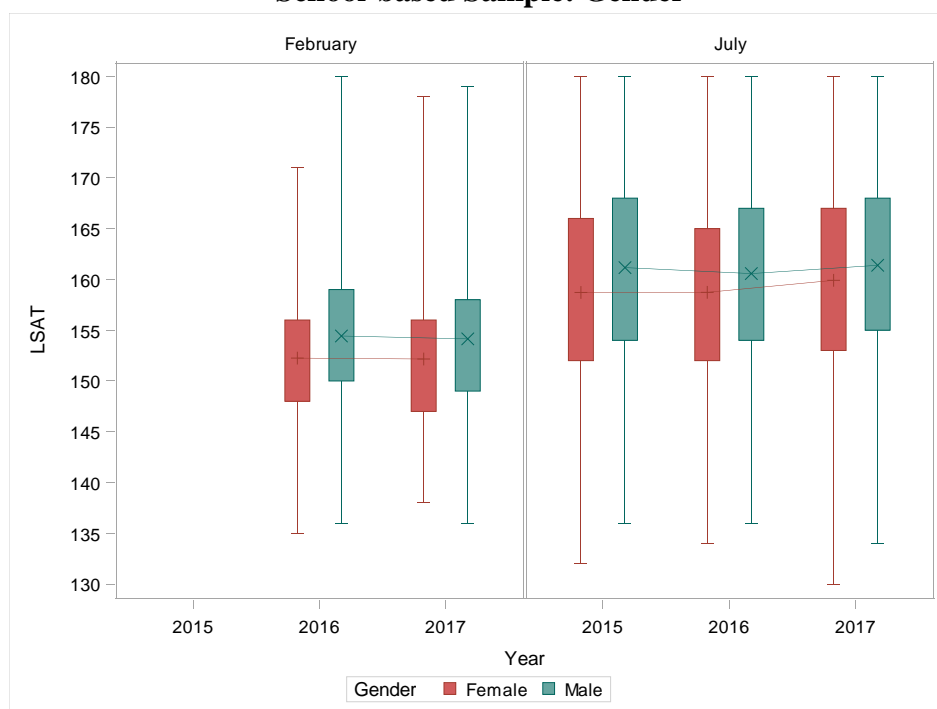**School-based Sample: Gender**

Figure 3.3.6
Means of LSAT Scores
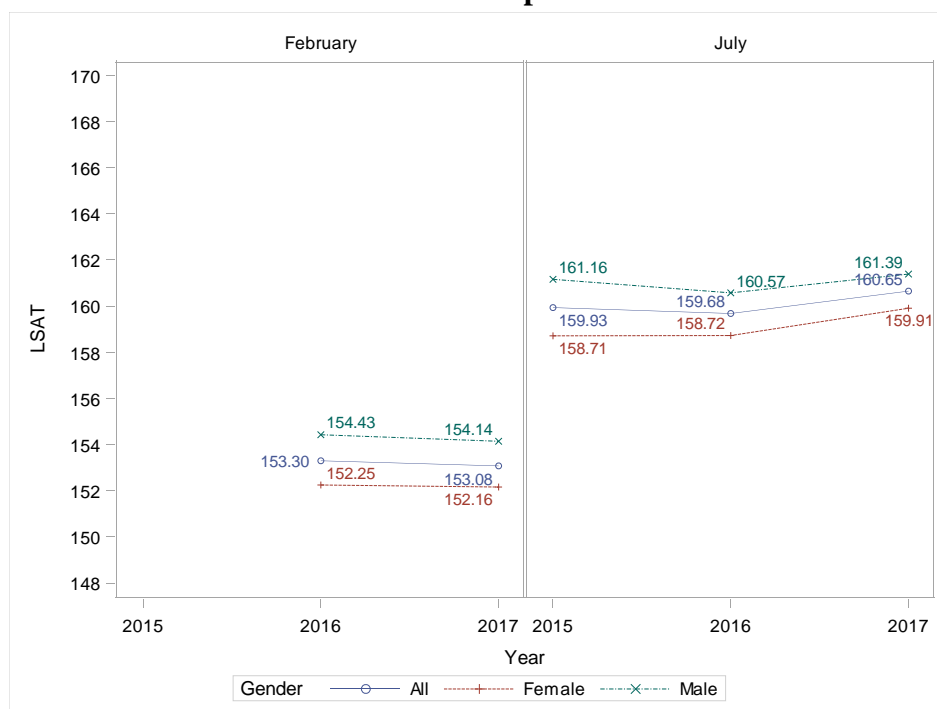**School-based Sample: Gender**

Table 3.3.4 contains the means and standard deviations of LSAT scores by gender for first-time takers. Similar to the entire school-based sample, males at each bar exam administration had higher average LSAT scores than females. The differences in average LSAT scores between males and females decreased across July exams with a difference of 2.24 in July 2015, 1.80 in July 2016 and 1.42 in July 2017. The difference in means increased for first-time takers across February 2016 (2.33) and February 2017 (4.94). The standard deviation was larger for males than females at each bar exam administration. In addition, the standard deviations for the February 2016 exam were smaller than the standard deviations for the other exams, indicating that the spread of scores for the February 2016 sample was smaller than for the samples with data from the other exams. For the July exams, average LSAT scores dropped between 2015 and 2016 (0.62 points for males, 0.18 points for females) and increased in July 2017 (0.30 points for males, 1.12 points for females) compared to July 2015 means). Figures 3.3.7 and 3.3.8 display the boxplots and mean plots for LSAT scores across bar exam administrations by gender for first-time takers.

Table 3.3.4
LSAT Means and Standard Deviations
School-based Sample First-time Takers: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	152.46	152.75	159.65	159.47	160.77
(SEM 0.2 to 1.1)	(SD)	(6.16)	(7.33)	(8.42)	(8.09)	(8.23)
	N	37	44	925	2004	1678
Male	Mean	154.79	157.69	161.89	161.27	162.19
(SEM 0.2 to 1.3)	(SD)	(7.93)	(8.90)	(8.45)	(8.19)	(8.44)
	N	47	48	929	2038	1700
All*	Mean	153.64	155.33	160.78	160.40	161.48
(SEM 0.1 to 0.9)	(SD)	(7.31)	(8.52)	(8.50)	(8.18)	(8.37)
	N	85	92	1873	4070	3405

* All includes candidates omitting their gender.

Figure 3.3.7
Boxplots of LSAT Scores
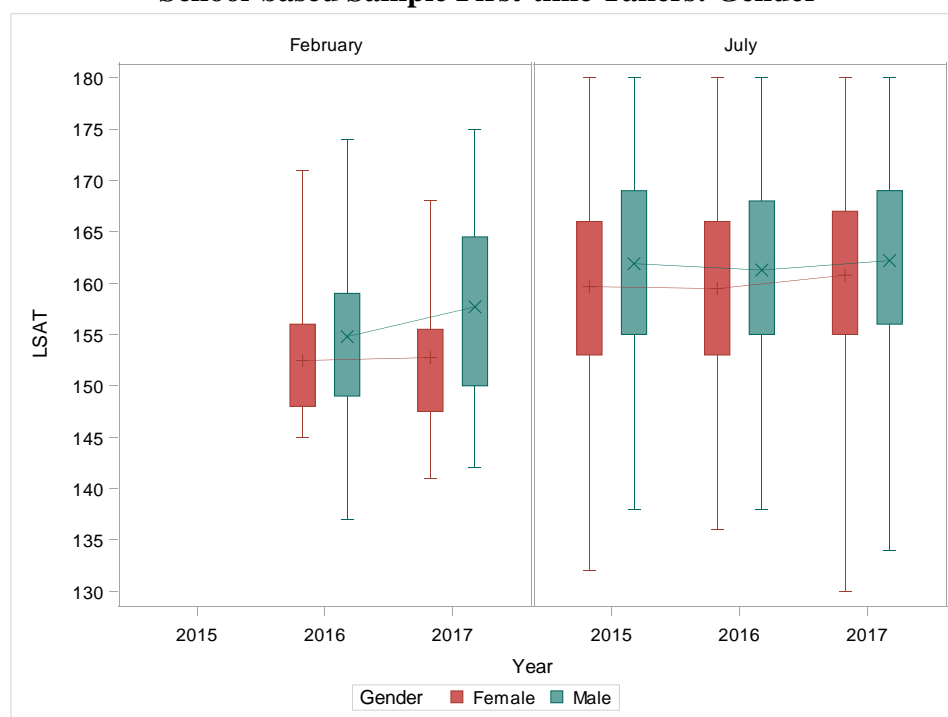**School-based Sample First-time Takers: Gender**

Figure 3.3.8
Means of LSAT Scores
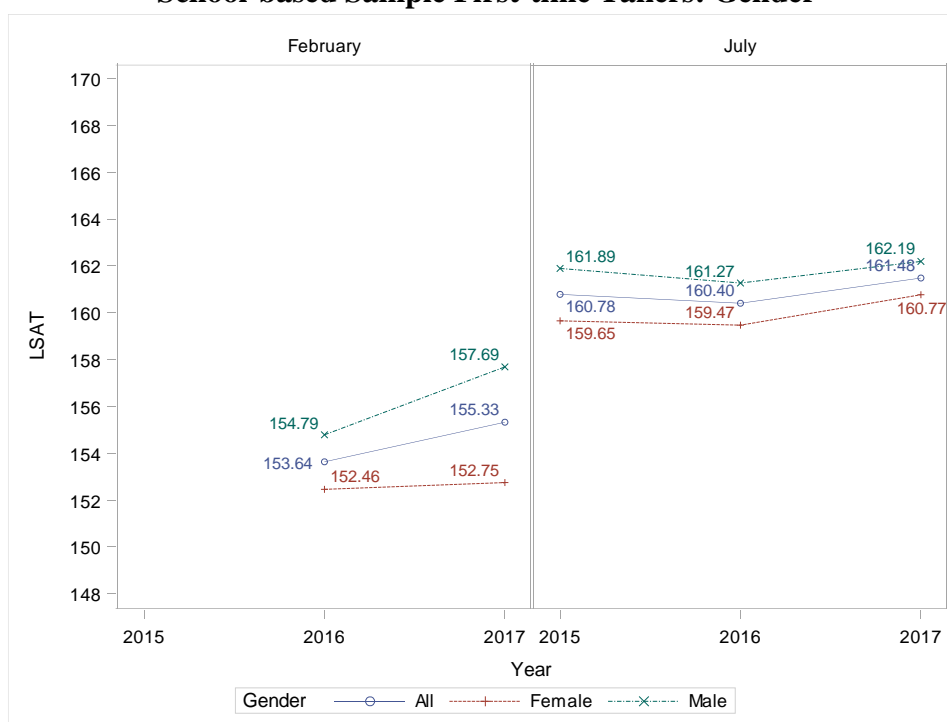**School-based Sample First-time Takers: Gender**

Table 3.3.5 contains the means and standard deviations of 4-point LGPA by gender for the entire school-based sample. For candidates taking the bar exam in July, males at each bar exam administration had slightly higher average 4-point LGPAs than females, although the differences were rather small (.01 to .03). Changes in means within each gender were modest across July exams with average 4-point LGPAs of 3.31, 3.30, and 3.33 for females and 3.33, 3.33, and 3.34 for males. For February, males and females had the same average 4-point LGPAs in 2016 (3.02) and females had a higher average than males in 2017 (3.06 versus 3.01). Figure 3.3.9 and 3.3.10 contain boxplots and plots of mean 4-point LGPAs for the entire school-based sample.[26] Changes in means within each gender for February exams were slightly larger than July with average 4-point LGPAs of 3.02 and 3.06 for females and 3.02 and 3.01 for males.

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[26] It is helpful to remember that 4-point LGPA is calculated in a way that equalizes the distribution of grades across schools but maintains the relative standing of grades within schools, so that there may be particular LGPAs that look very "low" or very "high" but these just indicate that the grades were particularly high or low for the distribution of LGPAs in a school. In other words, the very low minimum or very high maximum LGPAs contained in boxplots were an artifact of how 4-point LGPAs were calculated. For example, the original, unscaled LGPAs did not dip below 2.0 for schools with 4-point LGPAs.

Table 3.3.5
4-point LGPA Means and Standard Deviations
School-based Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	3.02	3.06	3.31	3.30	3.33
	(SD)	(0.29)	(0.27)	(0.33)	(0.32)	(0.33)
	N	265	393	1037	2223	1844
Male	Mean	3.02	3.01	3.33	3.33	3.34
	(SD)	(0.30)	(0.29)	(0.35)	(0.34)	(0.35)
	N	265	329	1027	2266	1880
All*	Mean	3.02	3.03	3.32	3.32	3.33
	(SD)	(0.29)	(0.29)	(0.34)	(0.33)	(0.34)
	N	534	723	2084	4520	3753

* All includes candidates omitting their gender.

SEM < 0.05

Figure 3.3.9
Boxplots of 4-point LGPA
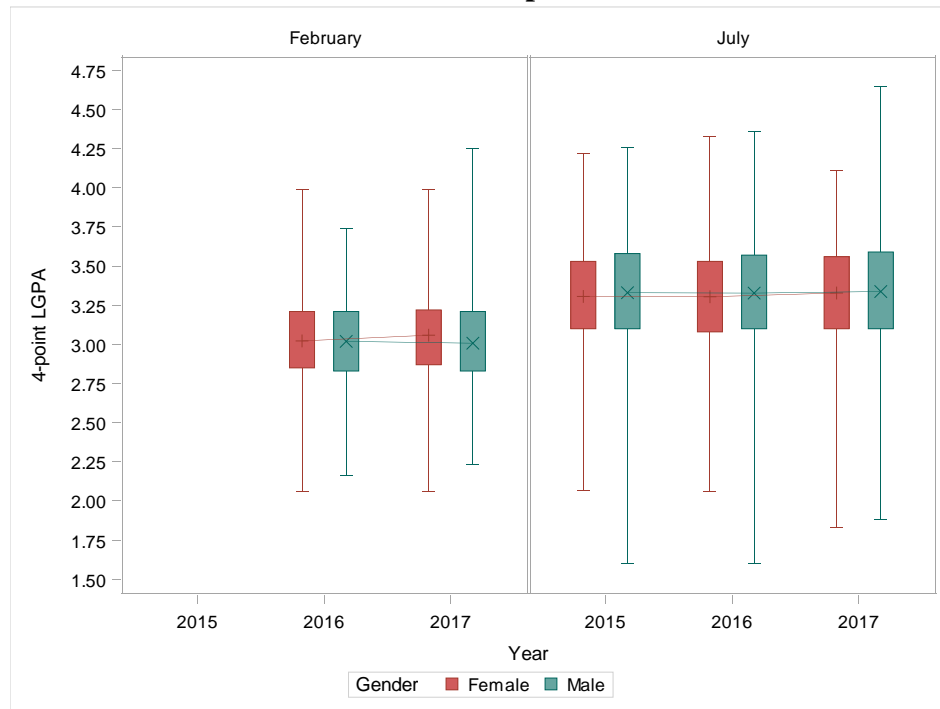**School-based Sample: Gender**

Figure 3.3.10
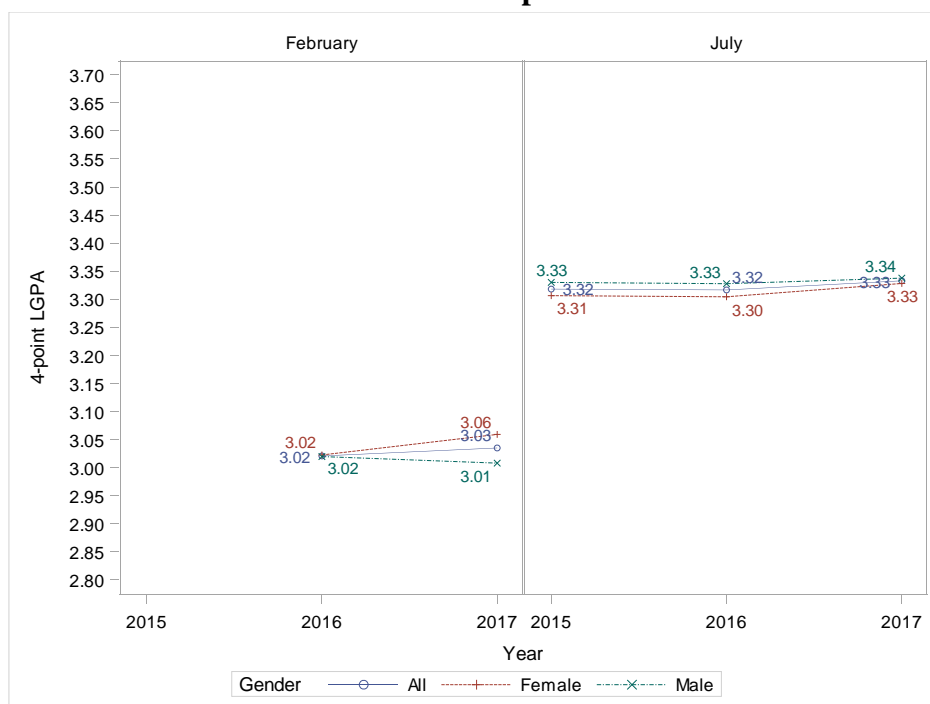**Means of 4-point LGPA**
School-based Sample: Gender

Table 3.3.6 lists the means and standard deviations of 4-point LGPA by gender for first-time takers. Similar to the entire school-based sample, males at each bar exam administration had slightly higher average 4-point LGPAs than females for each July bar exam administration, with differences in means of between 0.02 and 0.03. For February, the average 4-point LGPA was higher for females, with a difference in means of 0.04 in 2016 and 0.11 in 2017. Figures 3.3.11 and 3.3.12 display the boxplots and mean plots for 4-point LGPA across bar exam administrations by gender for first-time takers. Changes in means within each gender for July exams were modest and changes in means for February exams were slightly larger. Notice that female and male average 4-point LGPAs for first-time takers were rather closely clustered in July compared to February and that they remained more consistent across years for July compared to February.

For July exams, female and male candidates showed modest differences in average 4-point LGPAs and these patterns of differences were fairly consistent across years, although they did narrow slightly in July 2017. In addition, 4-point LGPAs remained relatively consistent across July 2015 and July 2016 with slight increases in 2017.

Table 3.3.6
4-point LGPA Means and Standard Deviations
School-based Sample First-time Takers: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	3.02	3.13	3.34	3.34	3.36
(SEM < 0.05)	(SD)	(0.28)	(0.25)	(0.31)	(0.31)	(0.31)
	N	37	44	925	2004	1678
Male	Mean	2.98	3.02	3.37	3.37	3.38
(SEM <= 0.1)	(SD)	(0.30)	(0.35)	(0.34)	(0.32)	(0.33)
	N	47	48	929	2038	1700
All*	Mean	3.00	3.07	3.35	3.35	3.37
(SEM < 0.05)	(SD)	(0.29)	(0.31)	(0.32)	(0.32)	(0.32)
	N	85	92	1873	4070	3405

* All includes candidates omitting their gender.

Figure 3.3.11
Boxplots of 4-point LGPA
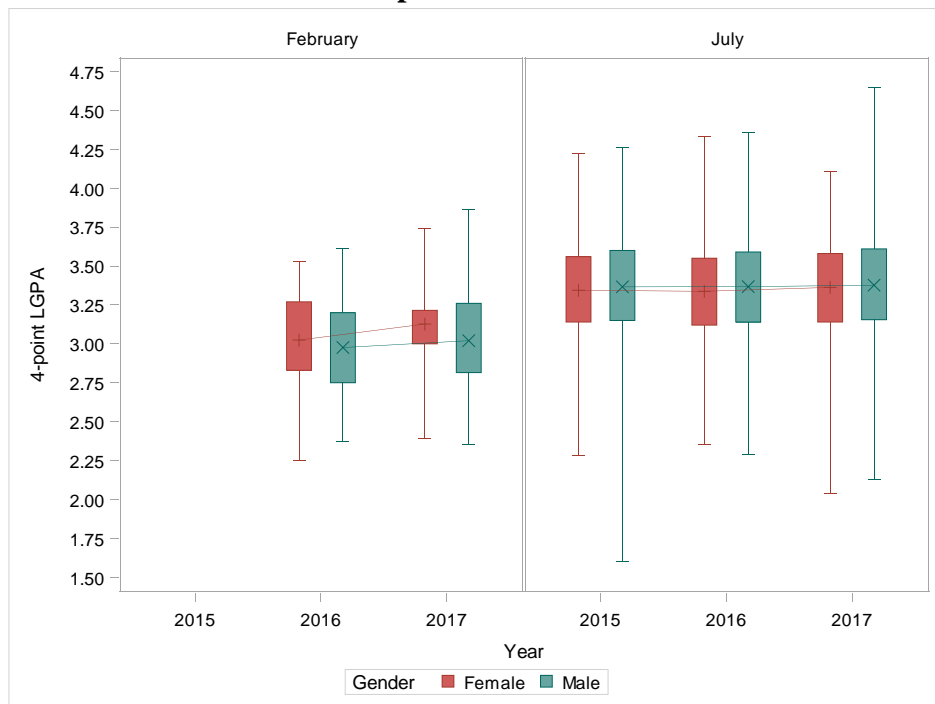**School-based Sample First-time Takers: Gender**

Figure 3.3.12
Means of 4-point LGPA
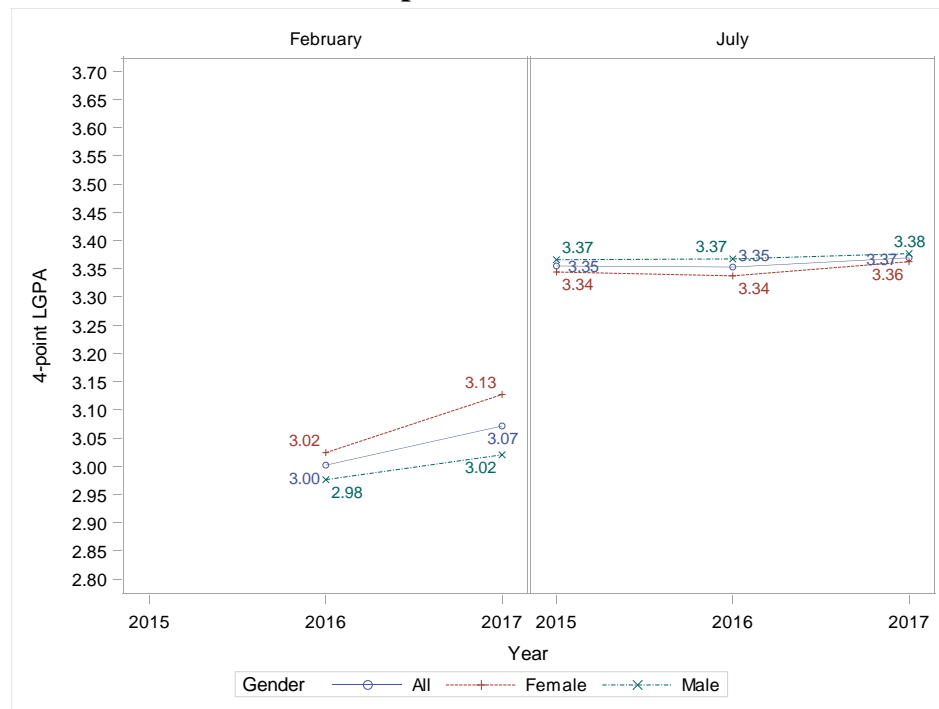**School-based Sample First-time Takers: Gender**

Table 3.3.7 lists the means and standard deviations of Index-based LGPA by gender for the entire school-based sample and Figures 3.3.13 and 3.3.14 display boxplots and means. Average Index-based LGPAs increased across July bar exams for females (9.75 to 9.85 to 10.03) and males (9.90 to 9.95 to 10.09). Average Index-based LGPAs for males were higher than females by 0.15 points in 2015, 0.10 points in 2016, and 0.06 points in 2017; the difference in means between females and males decreased across July bar exams. In February 2016, the average Index-based LGPA for males was higher than females (8.94 versus 8.84) and in February 2017 the average for females was higher than males (9.02 versus 8.96).

Table 3.3.7
Index-based LGPA Means and Standard Deviations
School-based Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	8.84	9.02	9.75	9.85	10.03
	(SD)	(0.57)	(0.63)	(0.90)	(0.84)	(0.85)
	N	265	393	1037	2223	1844
Male	Mean	8.94	8.96	9.90	9.95	10.09
	(SD)	(0.65)	(0.62)	(0.93)	(0.88)	(0.89)
	N	265	329	1027	2266	1880
All*	Mean	8.89	8.99	9.82	9.90	10.06
	(SD)	(0.61)	(0.62)	(0.92)	(0.86)	(0.87)
	N	534	723	2084	4520	3753

* All includes candidates omitting their gender.

SEM < 0.05

Figure 3.3.13
Boxplots of Index-based LGPA
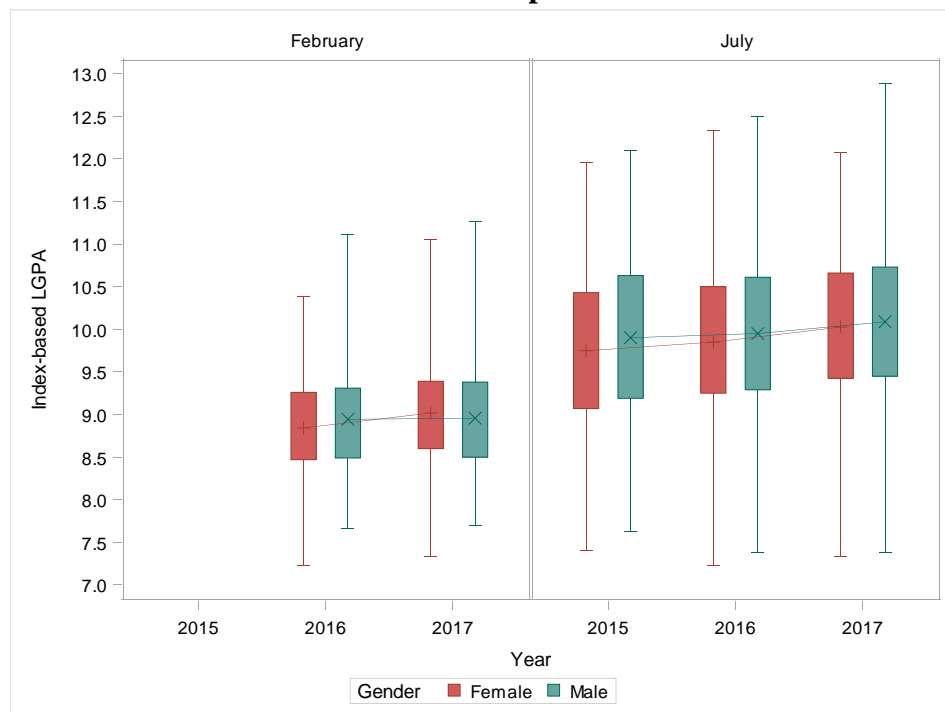**School-based Sample: Gender**

Figure 3.3.14
Means of Index-based LGPA
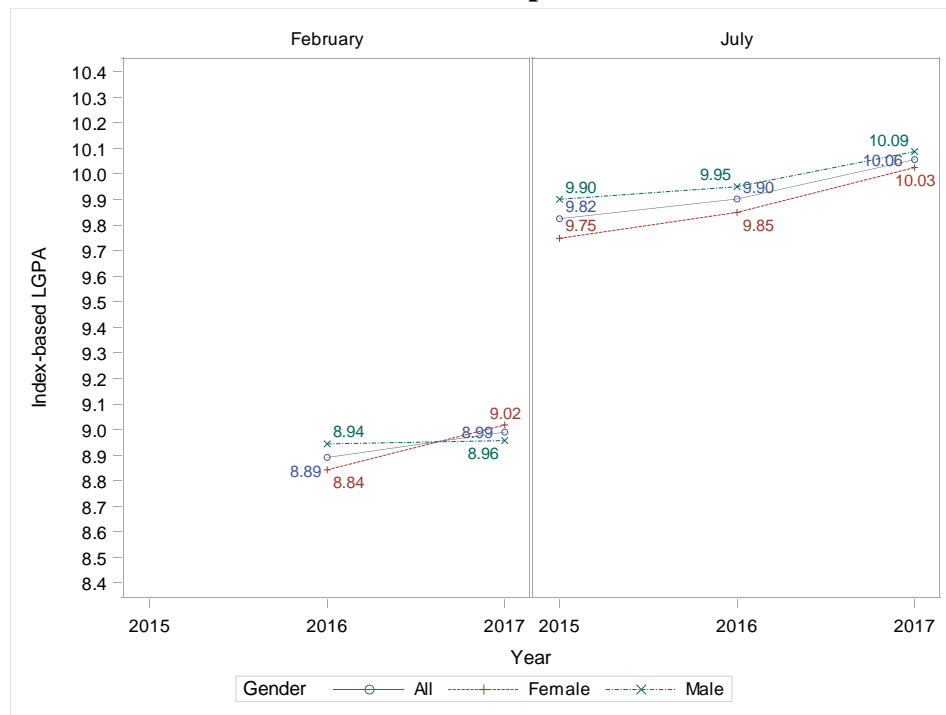**School-based Sample: Gender**

Table 3.3.8 contains the means and standard deviations of Index-based LGPA by gender for first-time takers and Figures 3.3.15 and 3.3.16 display boxplots and means. Similar to the entire school-based sample, average Index-based LGPAs for first time takers increased across bar exams. Also, males had higher average Index-based LGPAs than females in July and the differences in means between males and females narrowed across July exams (0.14 to 0.11 to 0.07). In February 2016, males had a higher average Index-based LGPA than females (8.99 versus 8.81) but in February 2017 males and females had the same average (9.26).

Table 3.3.8
Index-based LGPA Means and Standard Deviations
School-based Sample First-time Takers: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	8.81	9.26	9.88	9.97	10.15
	(SD)	(0.58)	(0.69)	(0.84)	(0.77)	(0.77)
	N	37	44	925	2004	1678
Male	Mean	8.99	9.26	10.02	10.08	10.22
	(SD)	(0.56)	(0.72)	(0.86)	(0.81)	(0.81)
	N	47	48	929	2038	1700
All*	Mean	8.90	9.26	9.95	10.03	10.18
	(SD)	(0.57)	(0.70)	(0.85)	(0.79)	(0.79)
	N	85	92	1873	4070	3405

* All includes candidates omitting their gender.

SEM <= 0.1

Figure 3.3.15
Boxplots of Index-based LGPA
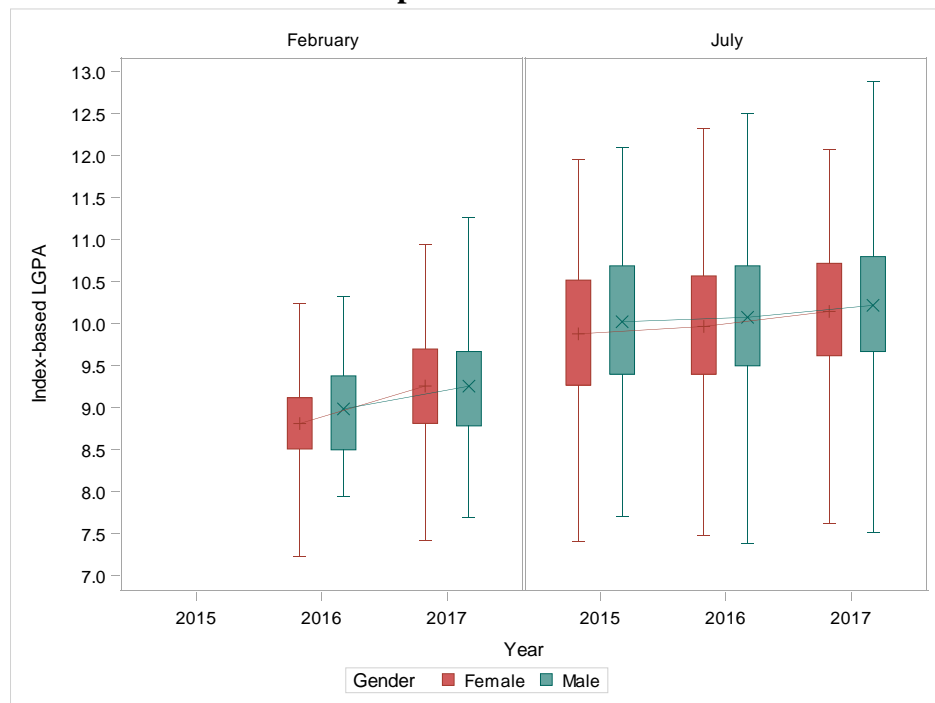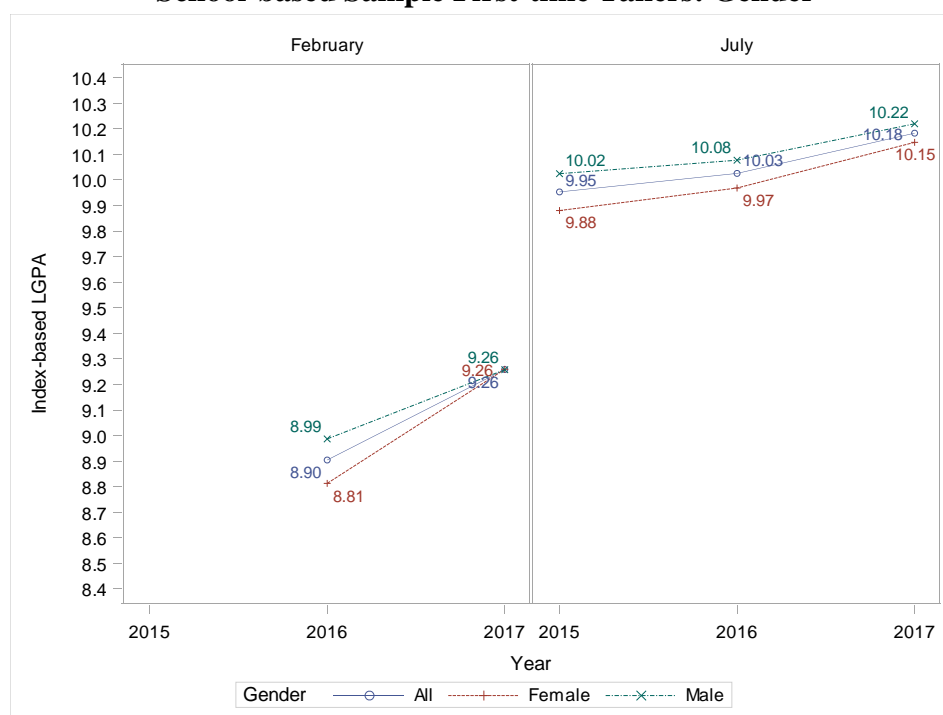**School-based Sample First-time Takers: Gender**

Figure 3.3.16
Means of Index-based LGPA
School-based Sample First-time Takers: Gender

Females and males showed differences in performance across background characteristics in the school-based sample. July performance tended to be more consistent than February performance across the school-based sample and first-time takers. Focusing on July, females tended to have higher average UGPAs than males and males tended to have higher average LSAT scores, 4-point LGPAs, and Index-based LGPAs compared to females. The differences in means between males and females tended to decrease between July 2015 and July 2017.

3.4 Performance on Background Characteristics by Race/Ethnicity

Candidate performance on UGPA, LSAT, 4-point LGPA, and Index-based LGPA background characteristics by race/ethnicity for the entire school-based sample and first-time takers in the school-based sample between July 2015 and July 2017 are provided in this section. Several race/ethnicity groupings were excluded from the analysis in this section because there were too few candidates in the grouping for the results to be reliable; the results for these groups are provided in Appendix E. Analysis below included Caucasian/White, Asian/Pacific Islander, Hispanic/Latino, and Black/African American groups. Parts of the analysis include an overall ("All") category that included all candidates, even those from racial/ethnic groups with few candidates. Similar to the gender section above, analysis of each background characteristic includes (a) a table of means (averages) and standard deviations (spread in scores) along with

sample sizes and standard errors of the mean (statistical uncertainty in the mean), (b) a figure with boxplots by race/ethnicity at each bar exam (illustrating the distributions of variables and trends across groups and bar exams, see section 3.3), and (c) a figure with means at each bar exam by race/ethnicity (to illustrate trends across groups and bar exams).

Table 3.4.1 and Figures 3.4.1 and 3.4.2 contain UGPAs for each bar exam by race/ethnicity for the entire school-based sample. In July, the pattern of average UGPAs was generally highest for the Caucasian/White and Asian/Pacific Islander groups, followed by the Hispanic/Latino and Black/African American groups. Average UGPAs dipped slightly for the Caucasian/White group (from 3.51 to 3.48) in July 2016 before recovering in July 2017. Average UGPAs increased at each July exam for the Asian/Pacific Islander group and Black/African American group (although only slightly in July 2016) and increased in July 2016 before leveling off in July 2017 for the Hispanic/Latino group. In February 2016 and 2017, the Hispanic/Latino group had the highest February average UGPA (3.21), followed by Caucasian/White (3.20), Asian/Pacific Islander (3.19), and Black/African American (3.08) groups. Average UGPAs increased slightly across February exams for Caucasian/White and Hispanic/Latino groups and decreased slightly for Asian/Pacific Islander and Black/African American groups.

Table 3.4.1
UGPA Means and Standard Deviations
School-based Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	3.20	3.23	3.48	3.46	3.51
(SEM < 0.05)	(SD)	(0.43)	(0.40)	(0.37)	(0.38)	(0.36)
	N	264	347	1407	2953	2388
Asian/Pacific Islander	Mean	3.19	3.15	3.39	3.45	3.51
(SEM < 0.05)	(SD)	(0.42)	(0.46)	(0.45)	(0.42)	(0.39)
	N	85	110	235	575	538
Black/African American	Mean	3.08	3.05	3.20	3.21	3.29
(SEM < 0.05)	(SD)	(0.43)	(0.44)	(0.43)	(0.39)	(0.43)
	N	84	141	182	374	307
Hispanic/Latino	Mean	3.21	3.25	3.31	3.38	3.38
(SEM <= 0.1)	(SD)	(0.41)	(0.37)	(0.38)	(0.38)	(0.38)
	N	44	66	104	266	214
All*	Mean	3.18	3.18	3.43	3.43	3.48
(SEM < 0.05)	(SD)	(0.43)	(0.43)	(0.40)	(0.39)	(0.38)
	N	534	723	2084	4520	3753

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 3.4.1
Boxplots of UGPA
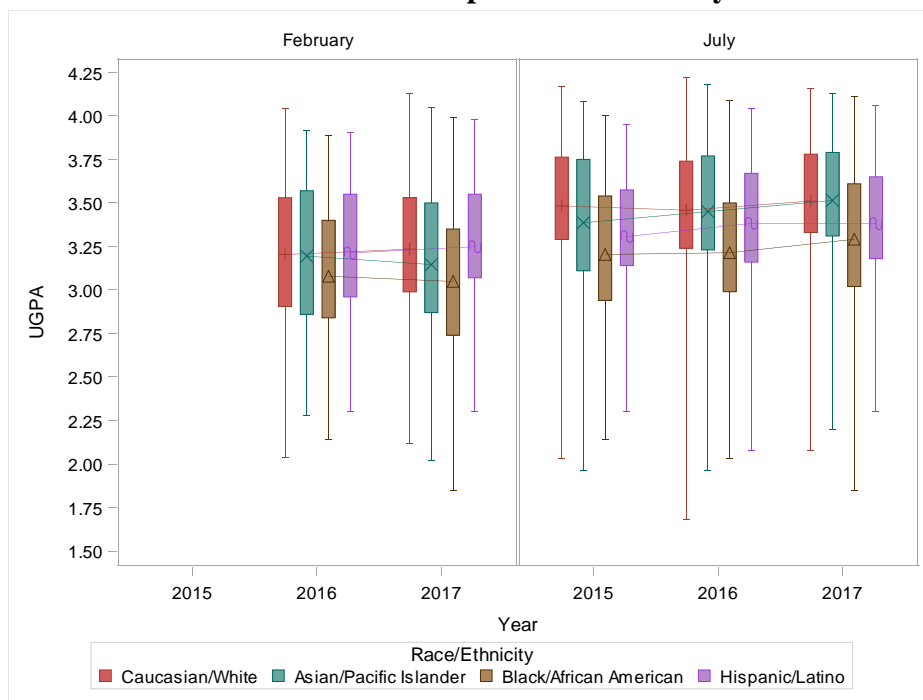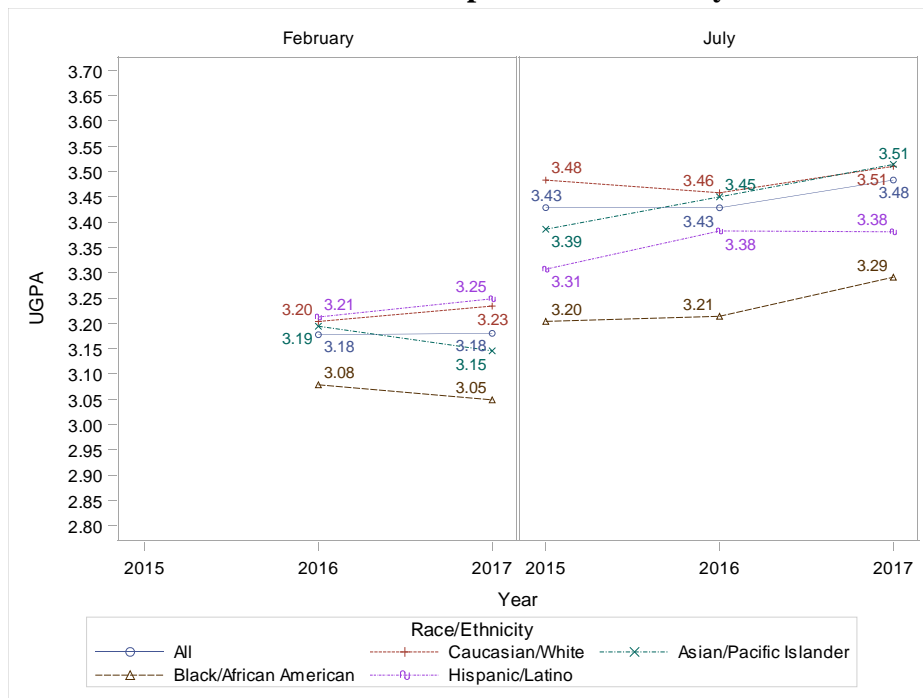**School-based Sample: Race/Ethnicity**

Figure 3.4.2
Means of UGPA
School-based Sample: Race/Ethnicity

The number of first-time taker candidates included in the school-based sample in almost all racial/ethnic groups for February exams was too small to provide statistically stable results for purposes of studying patterns of means across bar exams and groups. For example, the Caucasian/White group was largest with 35 first-time takers in February 2016 and 54 in February 2017 and the Hispanic/Latino group was smallest with 6 first-time takers in February 2016 and 7 in February 2017. Because of these small sample sizes, February first-time taker results were not reported for any of the analysis of background characteristics by race/ethnicity, with the exception of providing the overall February means (which did have adequate samples) in figures displaying means.

The first-time taker average UGPAs for the July 2015 exam was highest for the Caucasian/White group in July 2015, followed by the Asian/Pacific Islander group, Hispanic/Latino group, and Black/African American group (see Table 3.4.2, Figure 3.4.3 or Figure 3.4.4). However, in July 2017 the Asian/Pacific Islander group had the highest average UGPA followed by the Caucasian/White group, Hispanic/Latino group, and Black/African American group. In addition, average UPGA dipped for the Caucasian/White group in July 2016 before increasing in July 2017, the Asian/Pacific Islander group average UGPA increased at each July administration, and the Hispanic/Latino group average UGPA increased in July 2016 before leveling off in July 2017. The average UGPA for the Black/African American group was similar between July 2015 and July 2016 before increasing in July 2017.

Table 3.4.2
UGPA Means and Standard Deviations
School-based Sample First-time Takers: Race/Ethnicity

		July 2015	July 2016	July 2017
Caucasian/White	Mean	3.51	3.48	3.53
(SEM < 0.05)	(SD)	(0.35)	(0.36)	(0.35)
	N	1298	2726	2228
Asian/Pacific Islander	Mean	3.41	3.48	3.56
(SEM < 0.05)	(SD)	(0.42)	(0.41)	(0.35)
	N	212	510	477
Black/African American	Mean	3.27	3.27	3.37
(SEM < 0.05)	(SD)	(0.40)	(0.39)	(0.38)
	N	146	299	240
Hispanic/Latino	Mean	3.35	3.41	3.42
(SEM < 0.05)	(SD)	(0.37)	(0.35)	(0.35)
	N	83	235	182
All*	Mean	3.46	3.46	3.52
(SEM < 0.05)	(SD)	(0.38)	(0.38)	(0.35)
	N	1873	4070	3405

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

There were differences in average UGPAs across race/ethnicity and the magnitude of differences depended on the group and the bar exam administration being considered. With the exception of a slight dip in the average UGPA for the Caucasian/White group in July 2016, the average UGPAs for July exams tended to remain flat or increase between July 2015 and July 2017, after UBE adoption.

Figure 3.4.3
Boxplots of UGPA
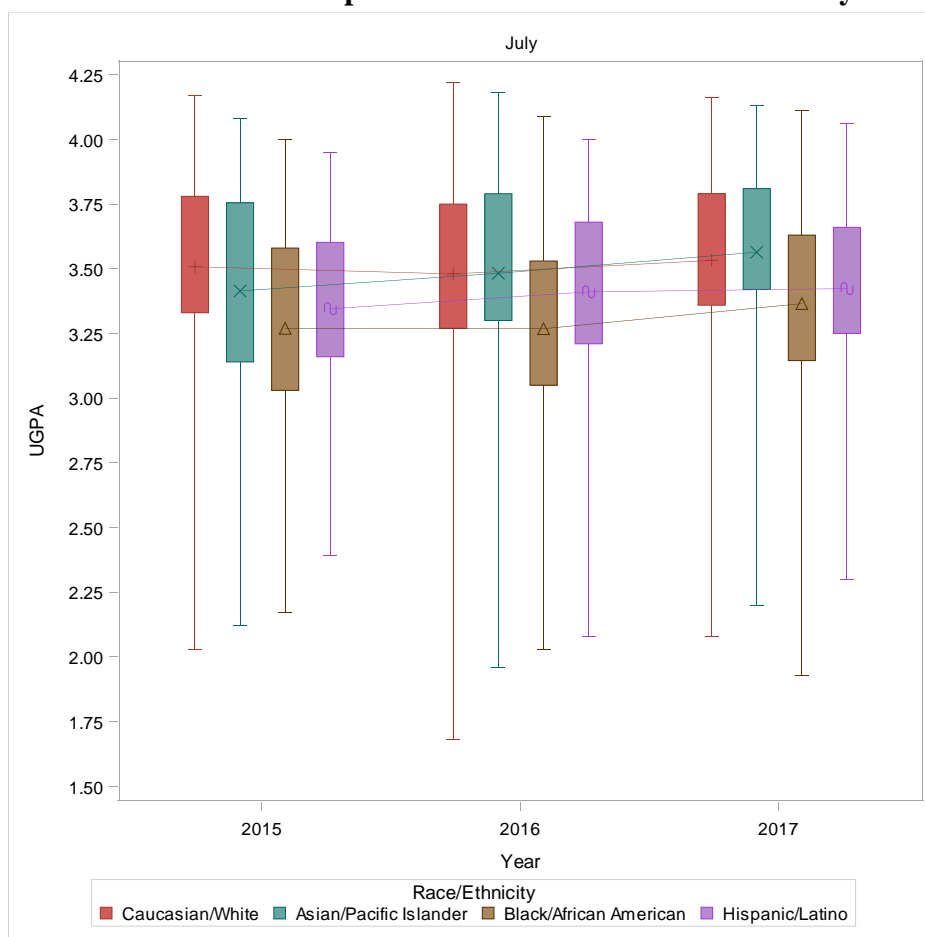**School-based Sample First-time Takers: Race/Ethnicity**

Figure 3.4.4
Means of UGPA
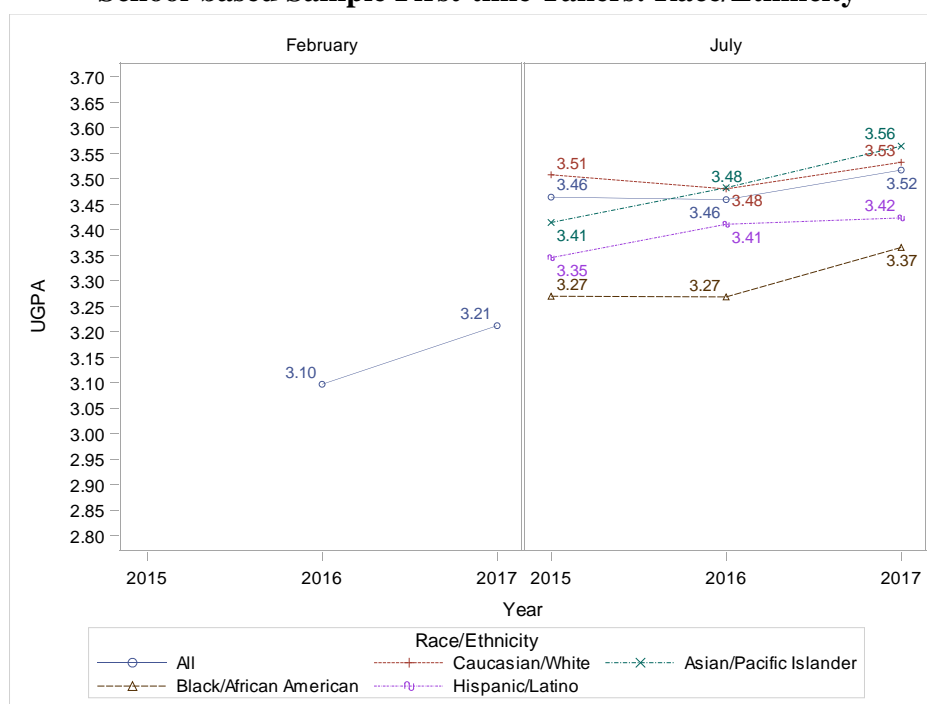**School-based Sample First-time Takers: Race/Ethnicity**

Table 3.4.3 and Figures 3.4.5 and 3.4.6 contain LSAT performance for each bar exam by race/ethnicity for the entire school-based sample. For each group of candidates in February and July, average LSAT scores were generally highest for the Asian/Pacific Islander group (with the exception of July 2015 where the Caucasian/White group mean was higher by .01 point), followed by the Caucasian/White group, Hispanic/Latino group, and Black/African American group. Average LSAT scores dipped slightly for the Caucasian/White group (from 161.25 to 160.45) in July 2016 before partially recovering in July 2017. Average LSAT scores increased at each July exam for the Asian/Pacific Islander, Black/African American, and Hispanic/Latino groups. In February 2016 and 2017, average LSAT scores increased for the Asian/Pacific Islander and Hispanic/Latino groups and decreased for the Caucasian/White and Black/African American groups. The July differences between the group with the highest average LSAT scores and lowest average LSAT scores were substantial at between roughly 8.2 and 9.1 points.

The patterns for first-time takers in July were similar to the entire school-based sample (Table 3.4.4, Figure 3.4.7, and Figure 3.4.8); the Asian/Pacific Islander group had the highest average LSAT score, followed by Caucasian/White, Hispanic/Latino, and Black/African American groups. Scores dipped slightly in July 2016 for the Caucasian/White group and average LSAT scores increased across July exams for the remaining groups, although the

increase for the Black/African American group was small. Differences between highest and lowest scoring groups remained large (roughly 7.8 to 9.1 points).

Table 3.4.3
LSAT Means and Standard Deviations
School-based Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	154.38	154.02	161.25	160.45	161.19
(SEM 0.1 to 0.5)	(SD)	(7.55)	(7.33)	(8.30)	(8.14)	(8.31)
	N	264	347	1407	2953	2388
Asian/Pacific Islander	Mean	154.73	155.09	161.24	162.18	163.55
(SEM 0.3 to 0.8)	(SD)	(7.82)	(7.41)	(9.23)	(8.25)	(8.75)
	N	85	110	235	575	538
Black/African American	Mean	150.32	150.27	153.02	153.38	154.43
(SEM 0.4 to 0.7)	(SD)	(6.40)	(5.21)	(7.62)	(6.92)	(7.32)
	N	84	141	182	374	307
Hispanic/Latino	Mean	151.64	152.21	154.76	155.90	156.62
(SEM 0.5 to 0.9)	(SD)	(5.84)	(7.24)	(8.33)	(7.98)	(7.96)
	N	44	66	104	266	214
All*	Mean	153.30	153.08	159.93	159.68	160.65
(SEM 0.1 to 0.3)	(SD)	(7.37)	(7.08)	(8.79)	(8.40)	(8.65)
	N	534	723	2084	4520	3753

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 3.4.5
Boxplots of LSAT
School-based Sample: Race/Ethnicity

Figure 3.4.6
Means of LSAT
School-based Sample: Race/Ethnicity

Table 3.4.4
LSAT Means and Standard Deviations
School-based Sample First-time Takers: Race/Ethnicity

		July 2015	July 2016	July 2017
Caucasian/White	Mean	161.82	160.94	161.75
(SEM = 0.2)	(SD)	(8.09)	(7.99)	(8.13)
	N	1298	2726	2228
Asian/Pacific Islander	Mean	162.00	163.20	164.78
(SEM 0.3 to 0.6)	(SD)	(8.91)	(7.78)	(8.05)
	N	212	510	477
Black/African American	Mean	154.25	154.29	155.65
(SEM 0.4 to 0.6)	(SD)	(7.60)	(6.89)	(7.31)
	N	146	299	240
Hispanic/Latino	Mean	155.70	156.52	157.48
(SEM 0.5 to 0.9)	(SD)	(8.44)	(7.96)	(7.84)
	N	83	235	182
All*	Mean	160.78	160.40	161.48
(SEM 0.1 to 0.2)	(SD)	(8.50)	(8.18)	(8.37)
	N	1873	4070	3405

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 3.4.7
Boxplots of LSAT
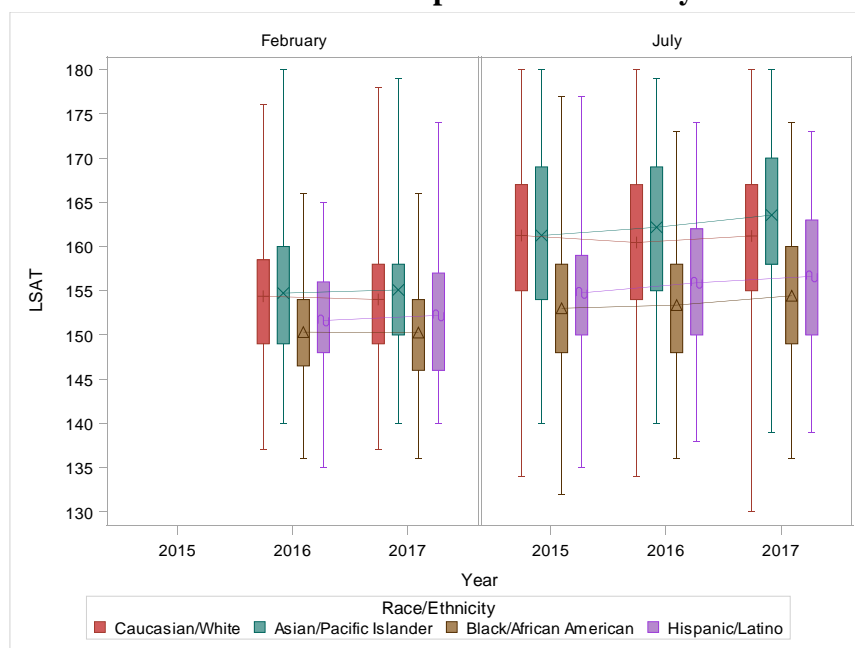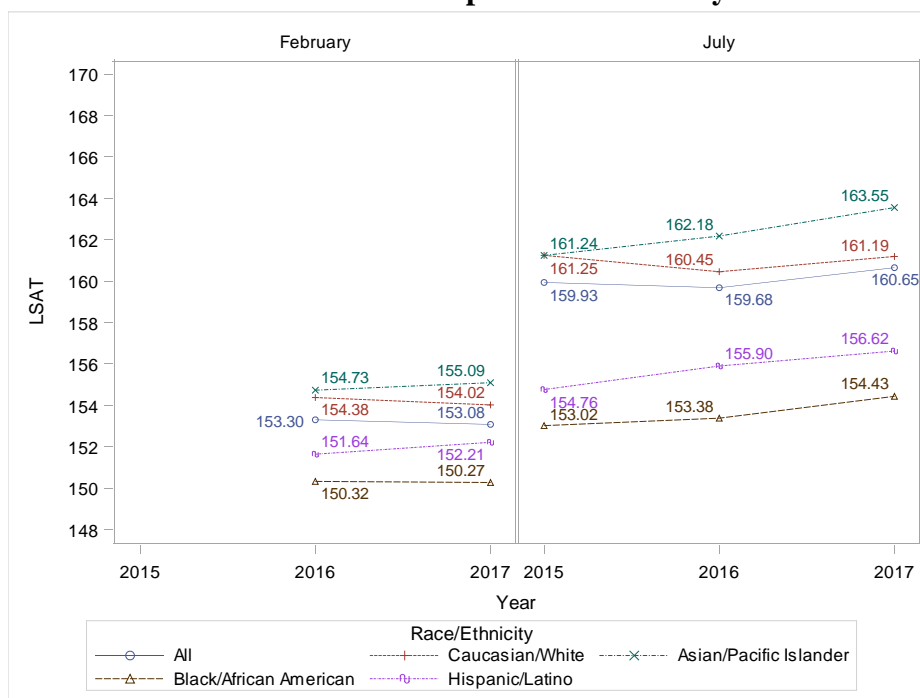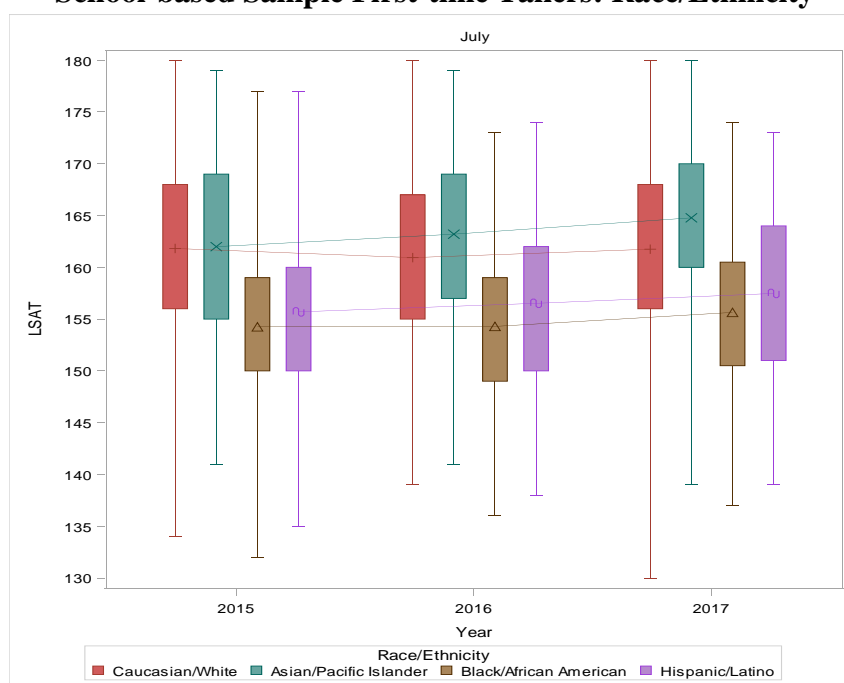**School-based Sample First-time Takers: Race/Ethnicity**

Figure 3.4.8
Means of LSAT
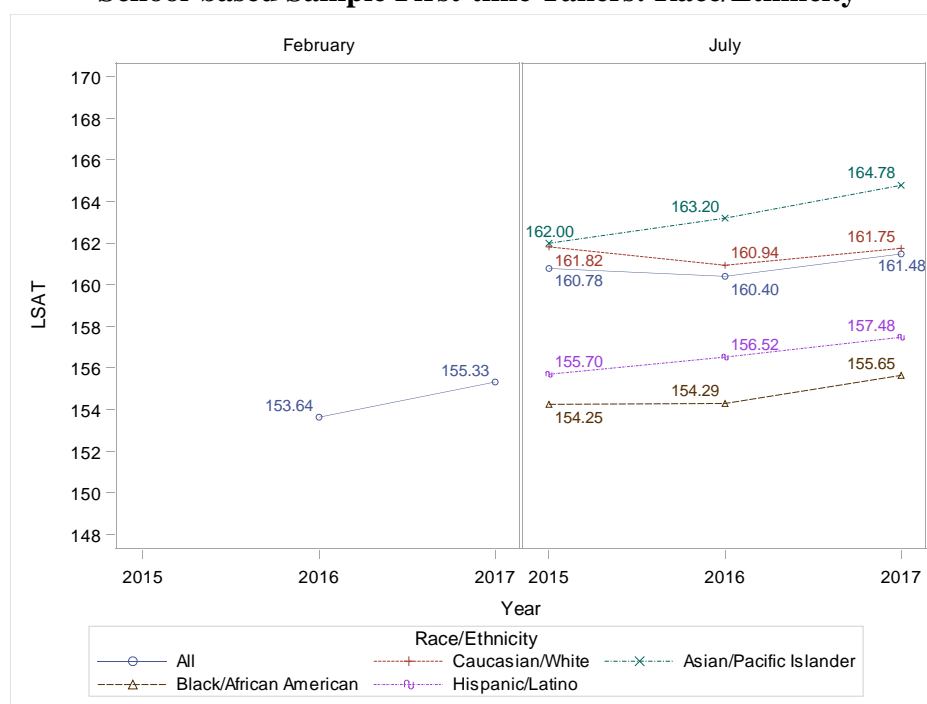**School-based Sample First-time Takers: Race/Ethnicity**

Table 3.4.5 and Figures 3.4.9 and 3.4.10 display the 4-point LGPAs for each bar exam by race/ethnicity for the entire school-based sample. For each group of candidates in February and July, average 4-point LGPAs were highest for the Caucasian/White group, followed by the Asian/Pacific Islander group, Hispanic/Latino group, and Black/African American group. Average 4-point LGPAs across July 2015 and July 2016 were comparable for the Caucasian/White group (3.38), increased slightly for the Asian/Pacific Islander group (3.21 to 3.23) and Hispanic/Latino group (3.20 to 3.22), and decreased slightly for the Black/African American group (3.10 to 3.08). Between July 2016 and July 2017, average 4-point LGPAs increased for each group except the Hispanic/Latino group, which had an average of 3.19 (a decrease in 0.03 points). Average 4-point LGPAs for each group increased slightly across February exams with the exception of the Black/African American group, which decreased slightly from 2.95 to 2.94.

Table 3.4.5
4-point LGPA Means and Standard Deviations
School-based Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	3.06	3.07	3.38	3.38	3.40
	(SD)	(0.29)	(0.28)	(0.33)	(0.33)	(0.32)
	N	264	347	1407	2953	2388
Asian/Pacific Islander	Mean	3.01	3.03	3.21	3.23	3.25
	(SD)	(0.30)	(0.22)	(0.33)	(0.29)	(0.30)
	N	85	110	235	575	538
Black/African American	Mean	2.95	2.94	3.10	3.08	3.11
	(SD)	(0.29)	(0.32)	(0.34)	(0.33)	(0.37)
	N	84	141	182	374	307
Hispanic/Latino	Mean	2.99	3.03	3.20	3.22	3.19
	(SD)	(0.26)	(0.28)	(0.30)	(0.32)	(0.29)
	N	44	66	104	266	214
All*	Mean	3.02	3.03	3.32	3.32	3.33
	(SD)	(0.29)	(0.29)	(0.34)	(0.33)	(0.34)
	N	534	723	2084	4520	3753

*All includes other racial/ethnic groups and those omitting racial/ethnic group.
SEM < 0.05

Figure 3.4.9
Boxplots of 4-point LGPA
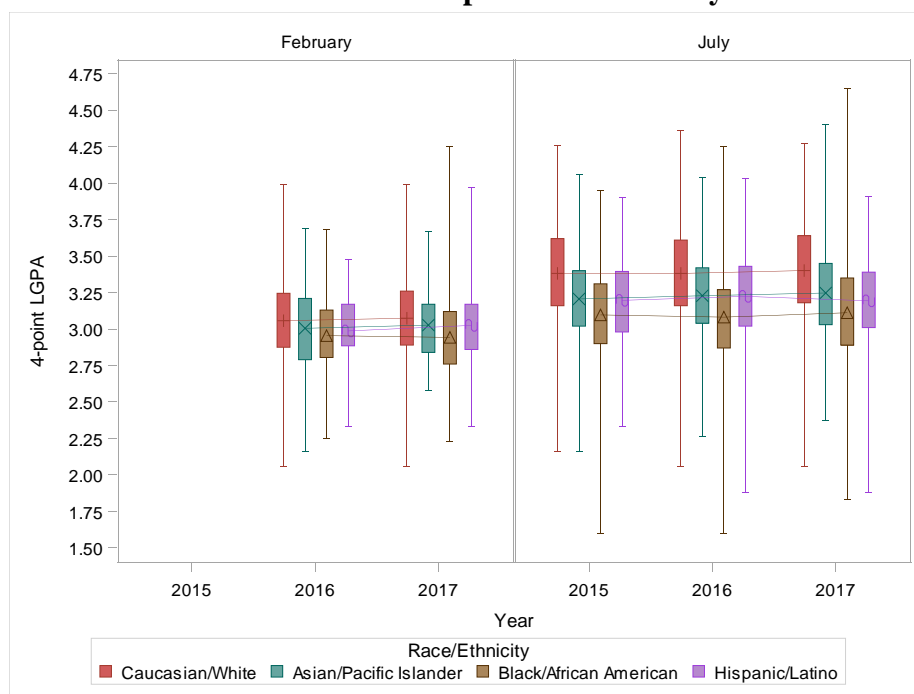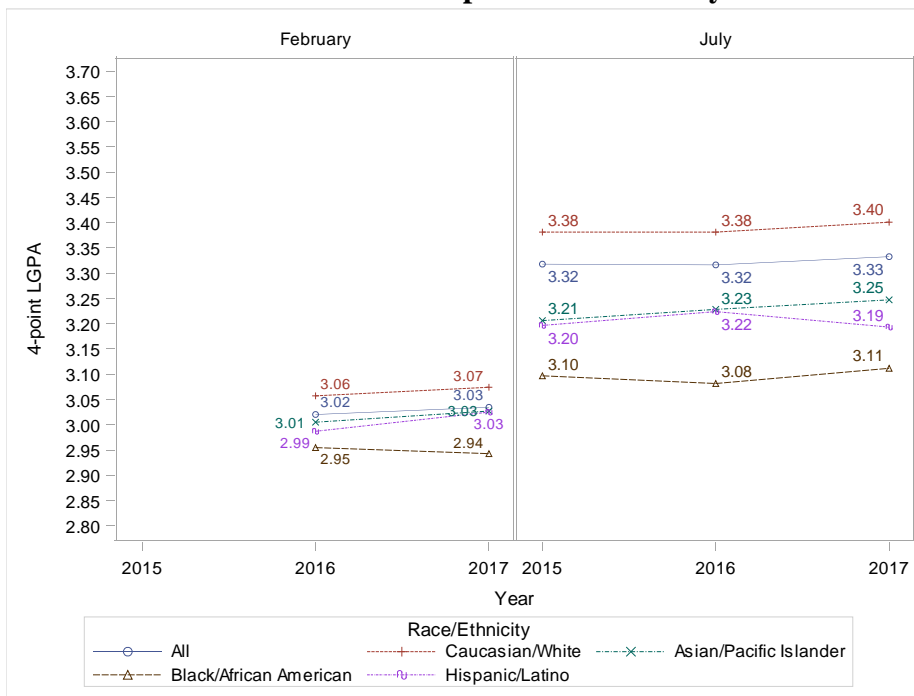**School-based Sample: Race/Ethnicity**

Figure 3.4.10
Means of 4-point LGPA
School-based Sample: Race/Ethnicity

The patterns for first-time takers in July were slightly different from the entire school-based sample (Table 3.4.6, Figure 3.4.11, and Figure 3.4.12); the Caucasian/White group had the highest average 4-point LGPAs and the Black/African American group had the lowest average 4-point LGPAs but the order of the Hispanic/Latino and the Asian/Pacific Islander groups in between varied depending on the bar exam. The average 4-point LGPA for the Hispanic/Latino group declined between July 2016 and July 2017 (from 3.26 to 3.24). The Black/African American group had average 4-point LGPA decline slightly between July 2015 and July 2016 but had the largest increase in 4-point LGPA between July 2016 and July 2017 with an increase of 0.05 (from 3.13 to 3.18).

Table 3.4.6
4-point LGPA Means and Standard Deviations
School-based Sample First-time Takers: Race/Ethnicity

		July 2015	July 2016	July 2017
Caucasian/White	Mean	3.41	3.41	3.43
	(SD)	(0.31)	(0.31)	(0.31)
	N	1298	2726	2228
Asian/Pacific Islander	Mean	3.23	3.26	3.28
	(SD)	(0.33)	(0.28)	(0.29)
	N	212	510	477
Black/African American	Mean	3.14	3.13	3.18
	(SD)	(0.32)	(0.31)	(0.36)
	N	146	299	240
Hispanic/Latino	Mean	3.24	3.26	3.24
	(SD)	(0.29)	(0.29)	(0.27)
	N	83	235	182
All*	Mean	3.35	3.35	3.37
	(SD)	(0.32)	(0.32)	(0.32)
	N	1873	4070	3405

*All includes other racial/ethnic groups and those omitting racial/ethnic group.
SEM < 0.05

Figure 3.4.11
Boxplots of 4-point LGPA
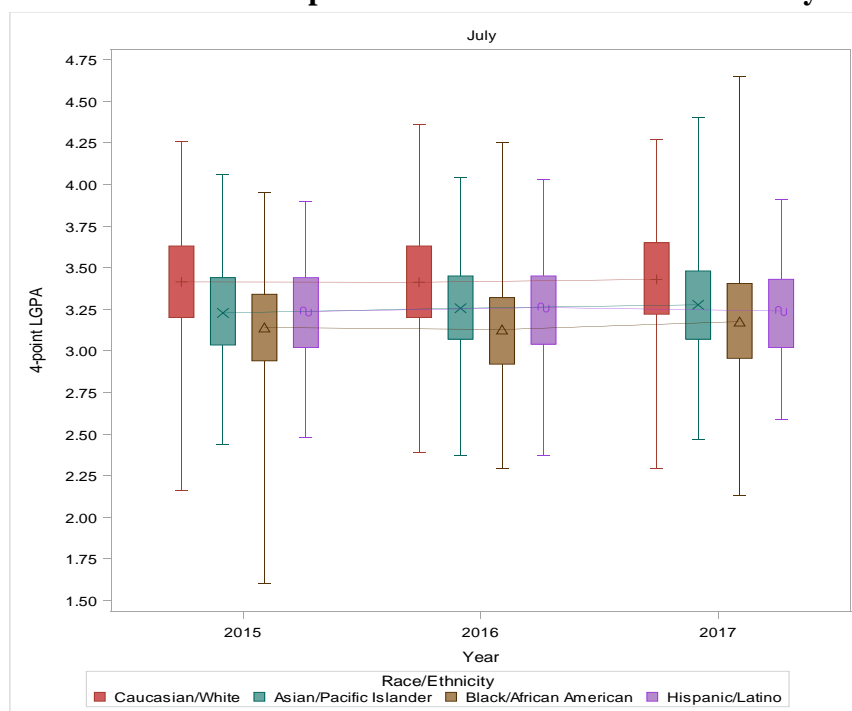**School-based Sample First-time Takers: Race/Ethnicity**

Figure 3.4.12
Means of 4-point LGPA
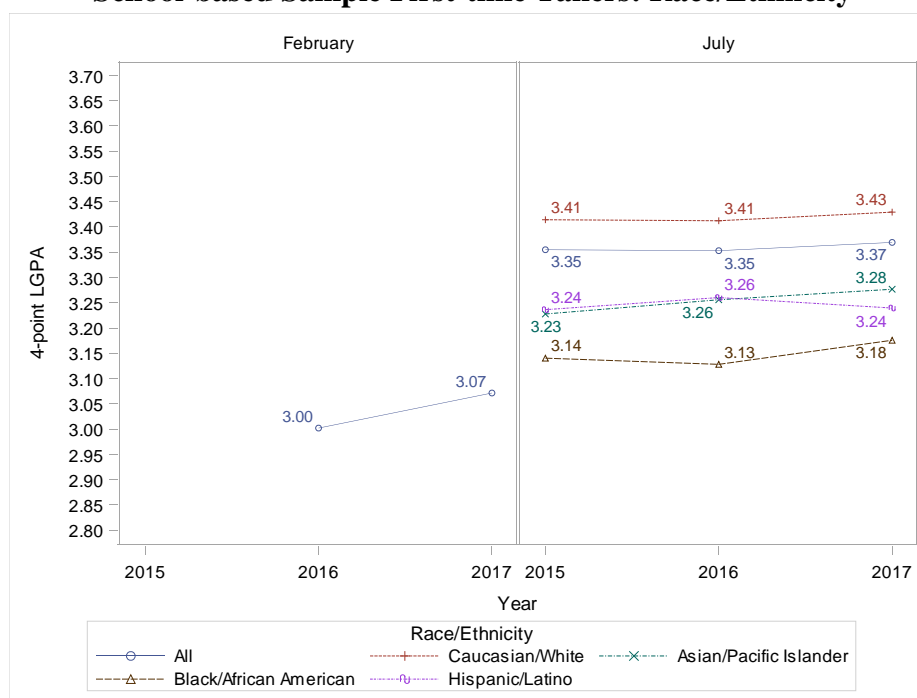**School-based Sample First-time Takers: Race/Ethnicity**

Table 3.4.7 and Figures 3.4.13 and 3.4.14 contain a summary of Index-based LGPA for each bar exam by race/ethnicity for the entire school-based sample. In July 2015, the Caucasian/White group had the highest average Index-based LGPA, followed by the Asian/Pacific Islander group, Hispanic/Latino group, and Black/African American group. But, in July 2016 and July 2017, the Caucasian/White group and Asian/Pacific Islander group had nearly identical average Index-based LGPAs followed by the Hispanic/Latino and Black/African American groups. Despite differences in means across groups, average Index-based LGPAs improved for each group across July exams, although averages for the Hispanic/Latino group leveled off somewhat between July 2016 and July 2017 compared to the other groups and the averages for the Caucasian/White group increased slightly between July 2015 and July 2016 compared to the other groups. In February, average Index-based LGPA increased for each group except the Black/African American group, which decreased slightly (from 8.86 to 8.85). In February 2016, the Asian/Pacific Islander group had the highest average (8.93), followed by Caucasian/White (8.92), Black/African American (8.86), and Hispanic/Latino (8.78). In addition, in February 2017, the Hispanic/Latino group had the highest average Index-based LGPA (9.05), followed by Asian/Pacific Islander (9.04), Caucasian/White (9.03), and Black/African American (8.85) groups. The Hispanic/Latino group had the largest increase in mean Index-based LGPA between February 2016 and February 2017 compared to other groups.

Table 3.4.7
Index-based LGPA Means and Standard Deviations
School-based Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	8.92	9.03	9.97	9.99	10.14
(SEM < 0.05)	(SD)	(0.62)	(0.62)	(0.89)	(0.83)	(0.84)
	N	264	347	1407	2953	2388
Asian/Pacific Islander	Mean	8.93	9.04	9.75	9.98	10.14
(SEM <= 0.1)	(SD)	(0.62)	(0.62)	(0.93)	(0.86)	(0.85)
	N	85	110	235	575	538
Black/African American	Mean	8.86	8.85	9.29	9.37	9.57
(SEM <= 0.1)	(SD)	(0.65)	(0.62)	(0.82)	(0.81)	(0.88)
	N	84	141	182	374	307
Hispanic/Latino	Mean	8.78	9.05	9.35	9.65	9.71
(SEM = 0.1)	(SD)	(0.54)	(0.67)	(0.83)	(0.83)	(0.80)
	N	44	66	104	266	214
All*	Mean	8.89	8.99	9.82	9.90	10.06
(SEM < 0.05)	(SD)	(0.61)	(0.62)	(0.92)	(0.86)	(0.87)
	N	534	723	2084	4520	3753

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 3.4.13
Boxplots of Index-based LGPA
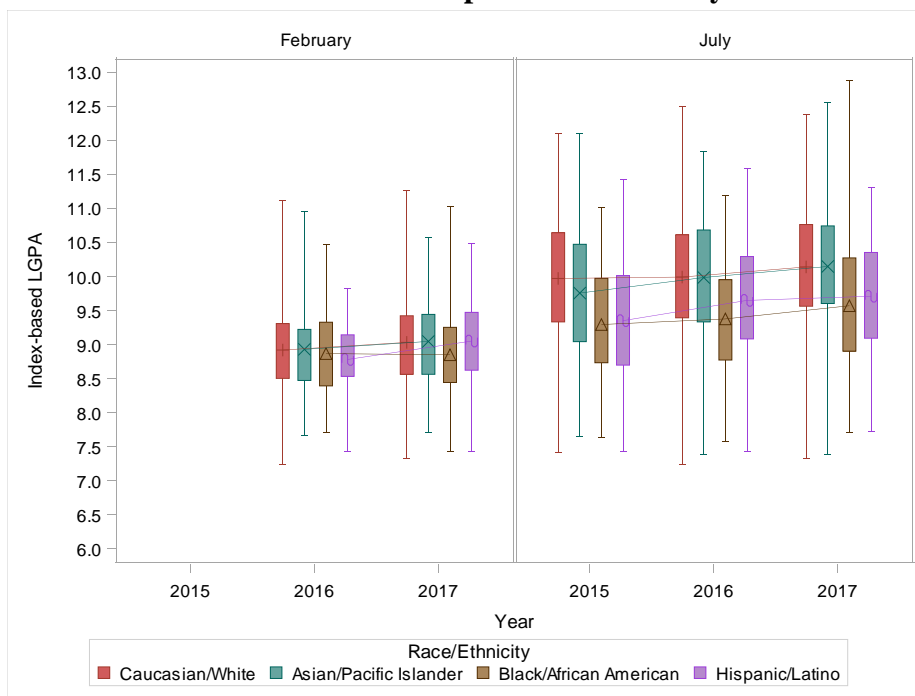**School-based Sample: Race/Ethnicity**

Figure 3.4.14
Means of Index-based LGPA
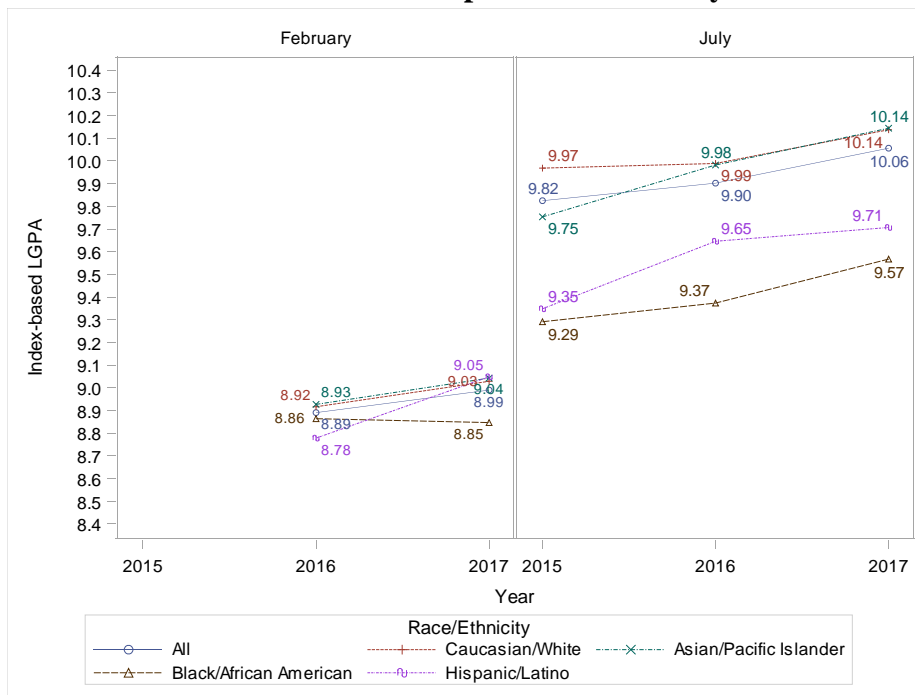**School-based Sample: Race/Ethnicity**

Table 3.4.8 and Figures 3.4.15 and 3.4.16 display summaries of Index-based LGPA for each July bar exam by race/ethnicity for first-time takers. Average Index-based LGPA was higher for first-time takers compared to all candidates in the school-based sample and Index-based LGPA increased for each racial/ethnic group across bar exams, although only slightly for the Caucasian/White group between July 2015 and July 2016. In July 2015, the Caucasian/White group had the highest average (10.07), followed by Asian/Pacific Islander group (9.86), the Hispanic/Latino group (9.52), and Black/African American group (9.48). In July 2016 and July 2017, the Asian/Pacific Islander group had the highest average Index-based LGPA (10.12 and 10.30), followed by the Caucasian/White group (10.09 and 10.23), Hispanic/Latino group (9.77 and 9.87), and Black/African American group (9.55 and 9.81).

Table 3.4.8
Index-based LGPA Means and Standard Deviations
School-based Sample First-time Takers: Race/Ethnicity

		July 2015	July 2016	July 2017
Caucasian/White	Mean	10.07	10.09	10.23
(SEM < 0.05)	(SD)	(0.83)	(0.77)	(0.78)
	N	1298	2726	2228
Asian/Pacific Islander	Mean	9.86	10.12	10.30
(SEM <= 0.1)	(SD)	(0.90)	(0.79)	(0.74)
	N	212	510	477
Black/African American	Mean	9.48	9.55	9.81
(SEM <= 0.1)	(SD)	(0.76)	(0.75)	(0.80)
	N	146	299	240
Hispanic/Latino	Mean	9.52	9.77	9.87
(SEM = 0.1)	(SD)	(0.76)	(0.77)	(0.73)
	N	83	235	182
All*	Mean	9.95	10.03	10.18
(SEM <0.05)	(SD)	(0.85)	(0.79)	(0.79)
	N	1873	4070	3405

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 3.4.15
Boxplots of Index-based LGPA
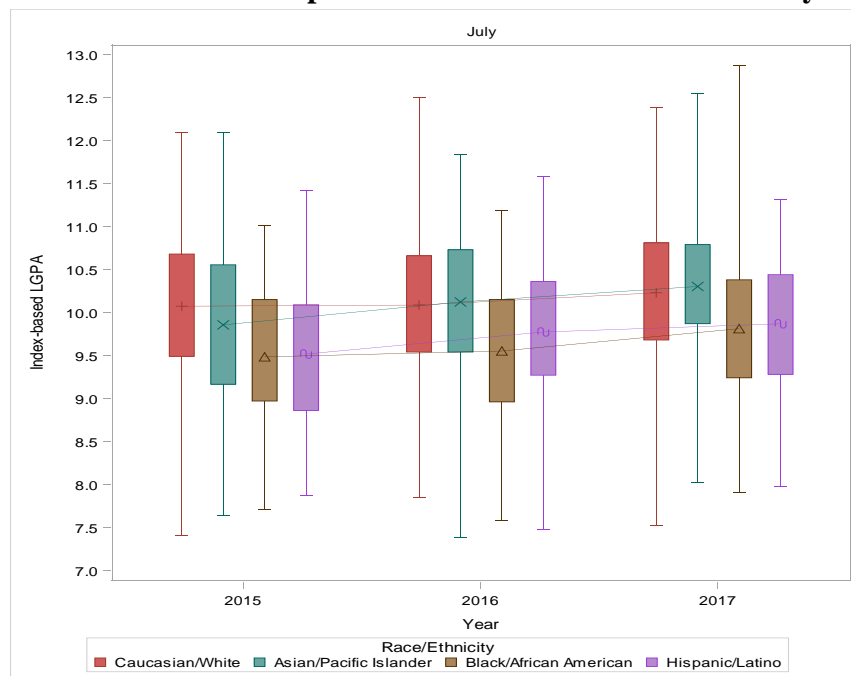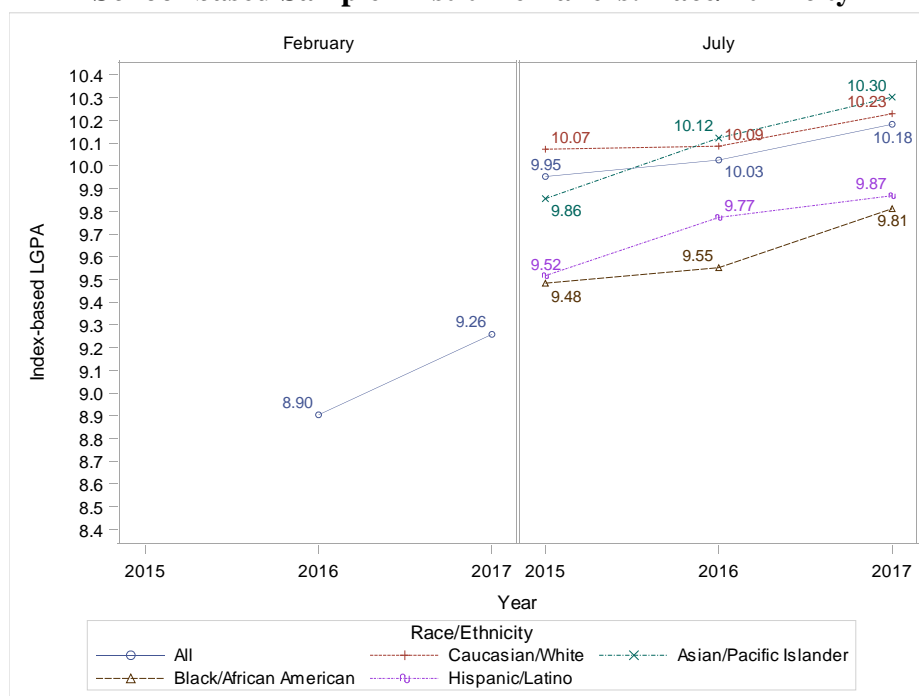**School-based Sample First-time Takers: Race/Ethnicity**

Figure 3.4.16
Means of Index-based LGPA
School-based Sample First-time Takers: Race/Ethnicity

Racial/ethnic groups generally had different mean performance on background characteristics at each bar exam. Despite these differences, performance tended to increase across July bar exams for each group, with a few exceptions. February mean performance on background characteristics appeared less stable, less consistently increased between 2016 and 2017, and tended to be lower than July.[27] The data available did not provide additional information to explain the average differences observed among groups; there are a variety of possible factors that may explain observed differences in candidate background characteristics, including additional information about candidate experiences in law school and earlier (educational and otherwise). A goal in this study was to study performance in the form of UGPAs, LSAT scores, and LGPAs to help contextualize bar exam performance. One important aspect of using candidate background characteristics to contextualize bar exam performance is to review the extent to which background characteristics were related to bar exam performance (before and after UBE adoption).

3.5 Performance on Background Characteristics by Bar Exam Scores

Next, we address the question, *how do candidate background characteristics relate to performance on the bar exam in New York before and after UBE adoption?* This question asks about relationships and there are two components to a relationship between variables: direction and strength. Direction refers to what a change in one variable is associated with in the other variable. A positive relationship indicates that an increase in one variable is associated with an increase in the other variable (positive direction) and a negative relationship indicates that an increase in one variable is associated with a decrease in the other variable (negative direction). With background characteristics and bar exam scores, we expect a positive relationship where an increase in, say, LGPA is associated with an increase in bar exam scores. Strength refers to the closeness of the relationship between variables or the degree to which changes in one variable are associated with changes in the other variable. For example, we would expect LGPA to have a fairly strong positive relationship with bar exam scores, especially compared to other, more distal variables like UGPA and LSAT score.

There are different ways of studying relationships between variables. Correlations[28] are statistics that can be used to succinctly summarize the relationship between variables, and we do so in section 3.7 below. Scatterplots, which consist of two-way plots displaying one variable against another by plotting points representing each individual person's values on the variables, are also commonly used to study the relationship between variables. Scatterplots can be a bit messy and difficult to interpret when one is not used to dealing with them and when the data

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[27] Performance on UGPA, LSAT, and LGPA broken down by gender and race/ethnicity for the entire school-based sample and first-time takers in the school-based sample are provided in Appendix D.

[28] We specifically used Pearson correlations to study the linear relationship between variables.

contains a lot of individuals. To avoid these challenges with scatterplots, we identified an approach to summarizing the relationship between variables that breaks performance on a background characteristic into pre-defined, non-overlapping ranges of performance, which can be thought of conceptually as bins or buckets. For example, all candidates with UGPAs between 3.10 and 3.29 are put into the same bin, then all candidates with UGPAs between 3.30 and 3.49 are put in the same bin, and so on, until all candidates are placed into a distinct UGPA bin. Then we can study the bar exam scores of the groups of candidates in each bin, specifically, summary statistics (e.g., means, standard deviations) and distributions (e.g., boxplots) of bar exam scores within each bin. We can then review the extent to which, for example, mean bar exam scores change across bins with low UGPAs compared to bins with high UGPAs to determine the direction and strength of relationship between the two variables. For example, if there is no relationship between UGPAs and bar exam scores, we would expect the pattern of average bar exam scores across UGPA bins to be the same (flat), if there is a positive relationship, then average bar exam scores across UGPA bins would increase, and if there is a negative relationship, then the average bar exam scores across UGPA bins would decrease. In addition, we can compare performance on the bar exam for candidates within each bin (i.e., candidates with background characteristics within a particular range) across bar exam administrations, which provides an indication of whether differences in bar exam scores exist across administrations after (roughly) controlling for a particular background characteristic.[29]

In this section, performance on background characteristics (UGPA, LSAT, and LGPA) was compared to bar exam scores for the entire school-based sample of candidates taking the February 2016, February 2017, July 2015, July 2016, and July 2017 bar exams in New York. Preliminary analysis indicated that the general patterns of results showing the relationship between background characteristics and bar exam scores by binning values on background characteristics were similar for the entire school-based sample and first-time takers only. Therefore, we only present the results for the entire school-based sample.[30]

In general, as background characteristics increased, bar exam scores also increased. July exams showed larger increases in bar exam scores as background characteristics increased compared to February exams. Even after accounting for a particular background characteristic, there were persistent differences in bar exam scores across administrations, with 2017 higher than 2016, which was higher than 2015; each of the background characteristics individually appeared to only partially account for increases in performance across bar exam administration.

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[29] There are more sophisticated ways of statistically controlling for the effects of background characteristics. See section 7, where we statistically model background characteristics as predictors of bar exam score, or Appendix O, which provides another statistical modelling approach that statistically controls for background characteristics.
[30] As might be expected, first-time takers did tend to score higher on the bar exam and on background characteristics, particularly in July.

Table 3.5.1 contains the average and standard deviation of bar exam scaled scores for candidates grouped (binned) by particular ranges of UGPA for each bar exam administration between July 2015 and July 2017. For example, the first row in the main portion of the table shows for those candidates with a UGPA below 2.50 the mean bar exam score (249.74 for February 2016), standard deviation (or spread) of the bar exam scores (17.90 for February 2016), and the number of candidates in the grouping (39 for February 2016). Scanning across the row shows similar statistics for candidates with UGPAs below 2.5 for each bar exam administration included in the school-based sample. Scanning down a column illustrates the mean bar exam score as UGPA increases, specifically, as UGPA increases for each bin of candidates. For example, for the column with July 2015 means, we can see that as UGPA increased, so did the average bar exam score, it started at 253.92 for the "Below 2.50" UGPA group and increased steadily to 302.84 for the "Above 3.89 group". For each UGPA grouping in July 2015, the average bar exam score increased by at least 2 points and as many as 11 points. This trend is visible in Figure 3.5.1 which contains boxplots (see Section 3.2 for an explanation of boxplots) that summarize the distribution of bar exam scores in each UGPA group by bar exam administration (with mean scores connected by a line between each boxplot) and in Figure 3.5.2 which displays the mean bar exam scores for each UGPA group. In Figure 3.5.2, the trend in bar exam scores was increasing as UGPA increased regardless of bar exam administration, although February showed smaller increases in average bar exam scores than July; the relationship between UGPA and bar exam scores was positive and it was stronger for July than for February exams. In addition, for candidates within each UGPA group, differences existed across bar exam administration. 2017 average bar exam scores were almost always higher than 2016 average bar exam scores (with the exception of the UGPA "2.70 to 2.89" group in July), which were higher than 2015 bar exam scores; after accounting for UGPA, differences remained in average bar exam scores across administration.

Again, the increase in average bar exam score as UGPA increased is larger in July compared to February. For February, the general trend was less steep, which indicates that as UGPA changed, average bar exam score changed less than in July. In addition, the average bar exam scores in February in several instances decreased from one UGPA group to the next. For example, for both Februarys (red and blue curves in the left panel of Figure 3.5.2) the average bar exam score decreased between the UGPA "3.50 to 3.69", "3.70 to 3.89", and "Above 3.89" groups. Such changes in direction for a small number of bins are not necessarily problematic or unexpected because the characteristics of each bin depend on (a) the strength of the relationship between variables, a weaker relationship would increase the likelihood of a change in direction, and (b) the group of candidates contained in the bin, which may be affected by a small or atypical group that happens to fall within a particular bin; we were mostly interested in the general pattern across bins. So, despite some breaks in the trend for particular bins, the overall pattern was for average bar exam scores to increase as UGPA increased, which indicated that UGPAs had a positive relationship with bar exam scores. However, the relationship was stronger in July and weaker in February.

Table 3.5.1
Bar Exam Scaled Score Means and Standard Deviations at Particular Ranges of UGPAs
School-based Sample

	February 2016 Bar Exam			February 2017 Bar Exam			July 2015 Bar Exam			July 2016 Bar Exam			July 2017 Bar Exam		
	Mean	(SD)	N	Mean	(SD)	N	Mean	(SD)	N	Mean	(SD)	N	Mean	(SD)	N
Below 2.50	249.74	(17.90)	39	255.80	(18.53)	59	253.92	(26.30)	65	266.64	(25.70)	136	266.98	(27.43)	83
2.50 to 2.69	251.86	(22.10)	43	252.31	(19.78)	39	259.02	(21.39)	57	270.51	(28.62)	115	275.51	(29.43)	77
2.70 to 2.89	253.23	(16.60)	57	257.63	(19.04)	72	265.42	(28.10)	106	271.48	(26.76)	198	270.73	(26.34)	153
2.90 to 3.09	251.76	(18.13)	78	257.41	(18.37)	108	268.76	(28.55)	176	276.33	(27.11)	411	279.67	(28.50)	272
3.10 to 3.29	257.95	(19.06)	89	261.92	(19.53)	127	273.80	(26.63)	240	280.82	(27.04)	577	283.47	(29.15)	387
3.30 to 3.49	257.69	(17.72)	80	262.75	(20.88)	134	283.49	(26.06)	358	288.64	(27.93)	793	291.36	(28.55)	619
3.50 to 3.69	261.74	(18.76)	91	268.56	(17.44)	111	289.72	(27.31)	481	295.05	(27.96)	988	301.26	(26.98)	890
3.70 to 3.89	263.00	(21.40)	42	266.83	(19.30)	60	300.75	(25.22)	444	303.30	(26.48)	950	310.13	(25.08)	921
Above 3.89	261.84	(25.02)	15	264.77	(23.56)	13	302.84	(26.18)	157	310.07	(25.81)	352	316.39	(23.49)	351

Figure 3.5.1
Boxplots of Bar Exam Scaled Scores at Particular Ranges of UGPAs
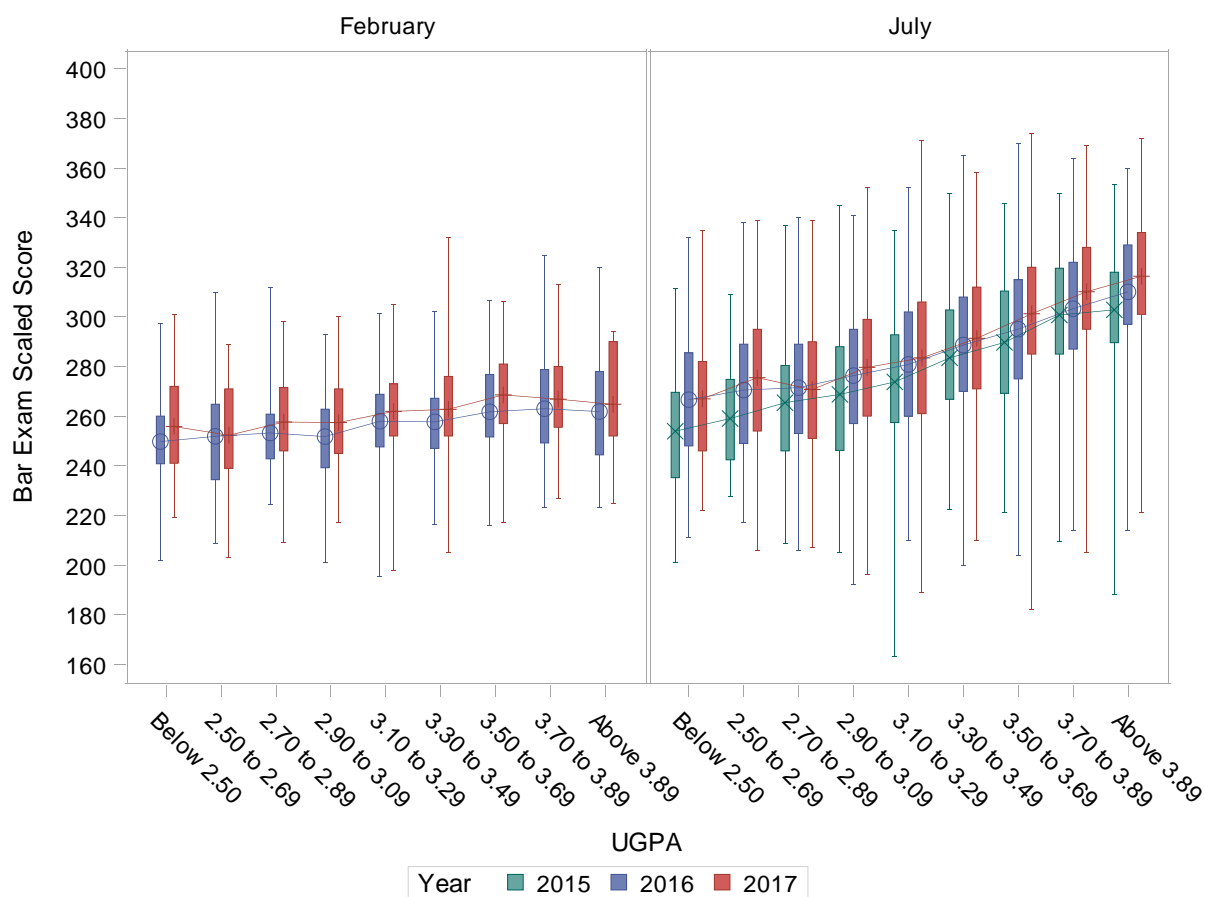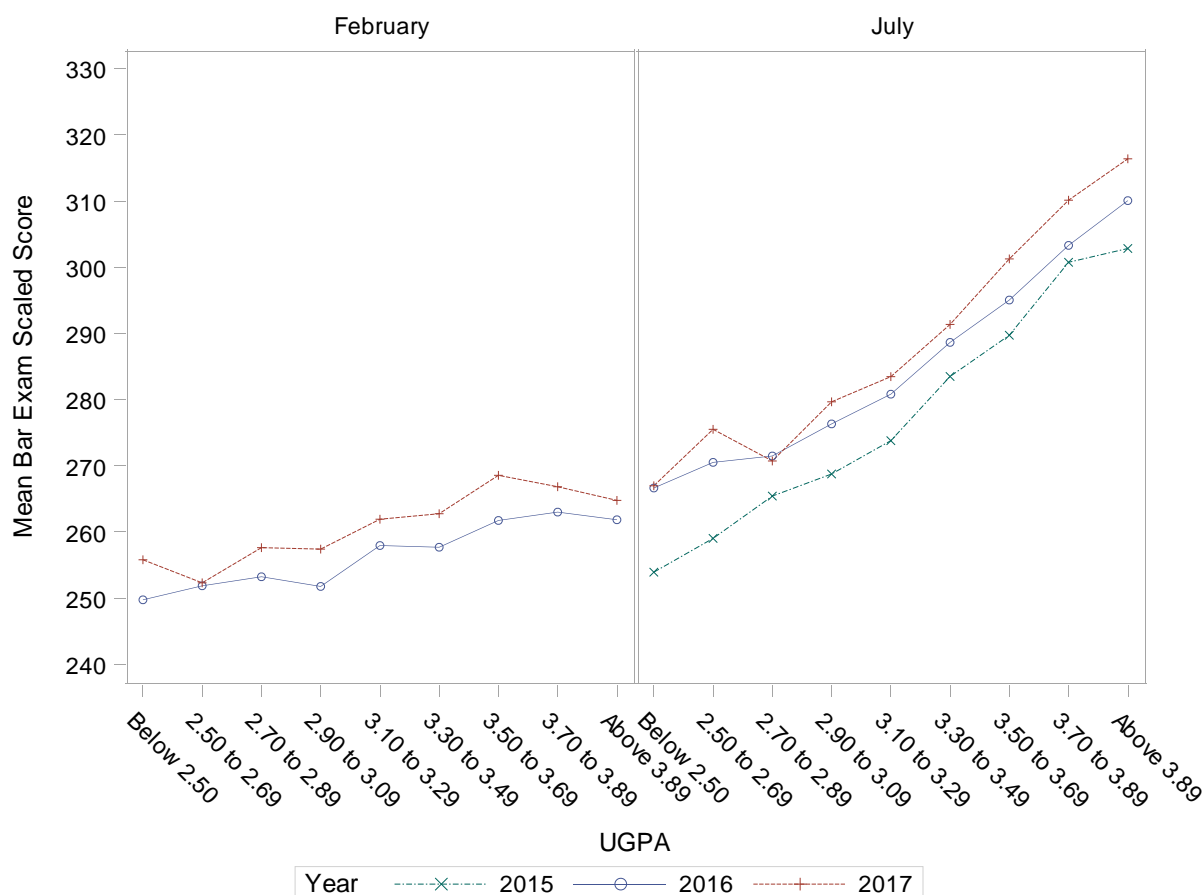**School-based Sample**

Figure 3.5.2
Mean Bar Exam Scaled Scores at Particular Ranges of UGPAs
School-based Sample

Similar to UGPA, binned LSAT scores (a) had a positive relationship with bar exam scores, (b) had a stronger relationship with bar exam scores for July candidates than for February candidates, and (c) generally resulted in higher average bar exam scores for more recent bar exams. Table 3.5.2 contains the means and standard deviations of bar exam scores for bins of LSAT scores. Figure 3.5.3 displays boxplots across LSAT scores and Figure 3.5.4 displays means. Figure 3.5.4 provides the overall picture for the relationship between LSAT scores and bar exam scores illustrating that average bar exam scores increase, in most cases, across LSAT bins. February exams show some bin-to-bin decreases especially at high LSAT scores; 2017 showed some fluctuations that were likely due in part to relatively few candidates (less than 20) contained in some bins. Also, average bar exam scores in February 2016 started out increasing at lower LSAT score levels and then flattened out, and decreased, at LSAT scores above 164. This could be due in part to the small groups at the highest LSAT score levels, or to a truly weak relationship with LSAT scores for the February groups, or both. Another possible explanation, as mentioned earlier, is that the school-based sample for February exams may not particularly well

represent domestic-educated candidates in New York. Caution is warranted in interpreting February results. In July, the average bar exam score consistently increased across LSAT group and the increase was larger than February. Finally, for a given LSAT group, average bar exam score in July 2017 was higher than July 2016, which was higher than July 2015, so LSAT scores did not appear to account for all of the differences between groups of candidates testing at a particular bar exam; even after accounting for LSAT scores, average bar exam scores appeared to increase across years (before and after UBE adoption).

Table 3.5.2
Bar Exam Scaled Score Means and Standard Deviations
at Particular Ranges of LSAT Scores
School-based Sample

	February 2016			February 2017			July 2015			July 2016			July 2017		
	Bar Exam			Bar Exam			Bar Exam			Bar Exam			Bar Exam		
	Mean	(SD)	N	Mean	(SD)	N	Mean	(SD)	N	Mean	(SD)	N	Mean	(SD)	N
Below 144	248.91	(17.79)	40	254.74	(20.84)	43	250.44	(22.76)	61	252.00	(25.21)	87	256.69	(22.05)	93
144 to 147	252.98	(16.42)	66	255.88	(19.36)	112	255.50	(24.19)	110	263.44	(20.76)	240	264.17	(24.43)	184
148 to 151	253.21	(18.03)	125	260.69	(18.38)	168	263.81	(24.20)	209	269.69	(25.34)	512	274.15	(25.26)	349
152 to 155	258.48	(18.48)	126	260.58	(18.67)	171	273.96	(26.10)	315	278.33	(25.76)	723	283.36	(27.54)	471
156 to 159	257.74	(18.70)	78	262.15	(19.48)	110	280.70	(28.31)	310	286.41	(26.99)	683	291.15	(25.74)	539
160 to 163	261.91	(20.91)	46	266.06	(20.23)	49	287.36	(25.16)	283	296.47	(25.73)	634	301.00	(26.06)	559
164 to 167	264.70	(22.37)	28	277.45	(19.61)	38	300.01	(23.88)	333	302.97	(23.02)	717	309.98	(23.11)	666
168 to 171	262.62	(27.48)	18	263.67	(18.98)	21	301.59	(22.13)	255	310.45	(22.56)	571	314.90	(23.46)	505
Above 171	263.20	(26.93)	7	281.27	(12.70)	11	309.50	(21.48)	208	316.92	(22.41)	353	318.95	(22.25)	387

Figure 3.5.3
Boxplots of Bar Exam Scaled Scores at Particular Ranges of LSAT Scores
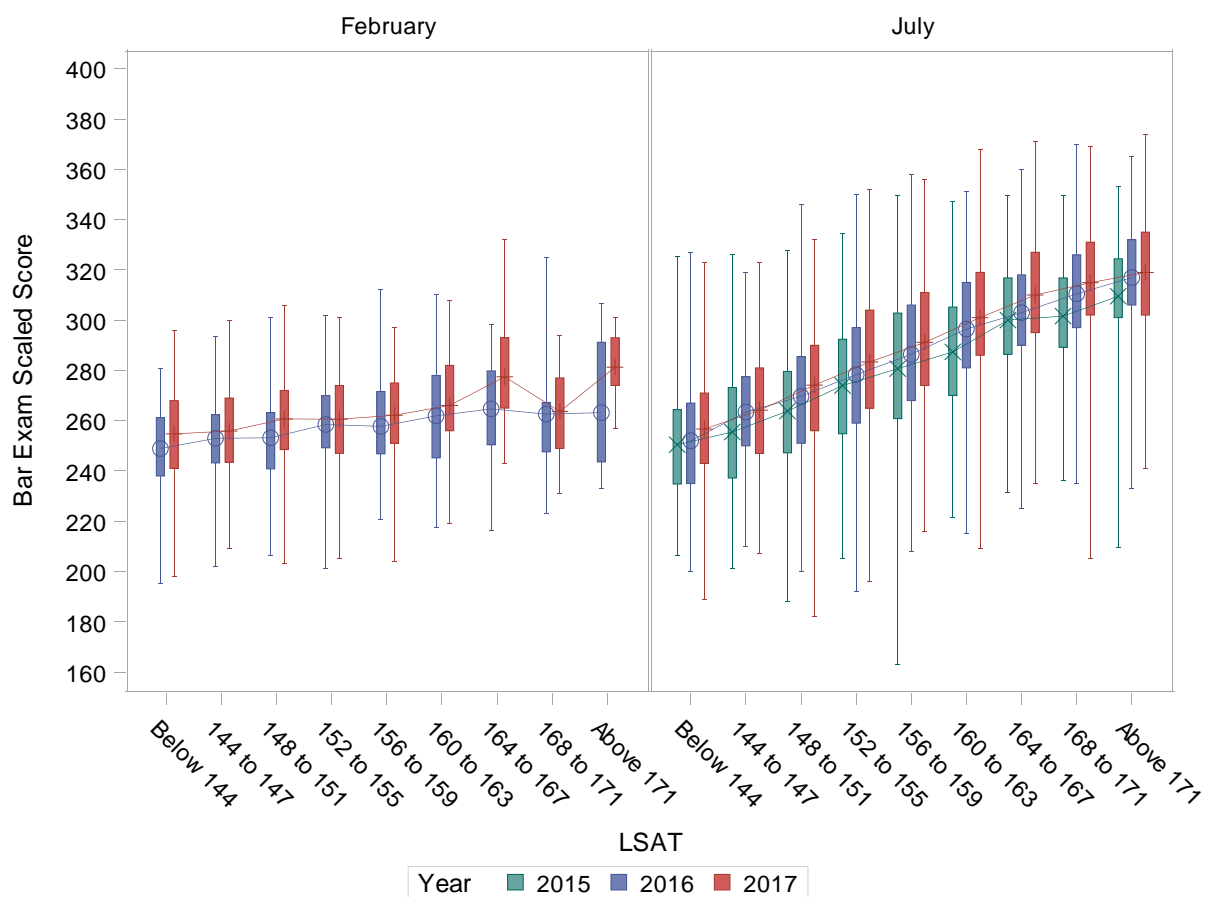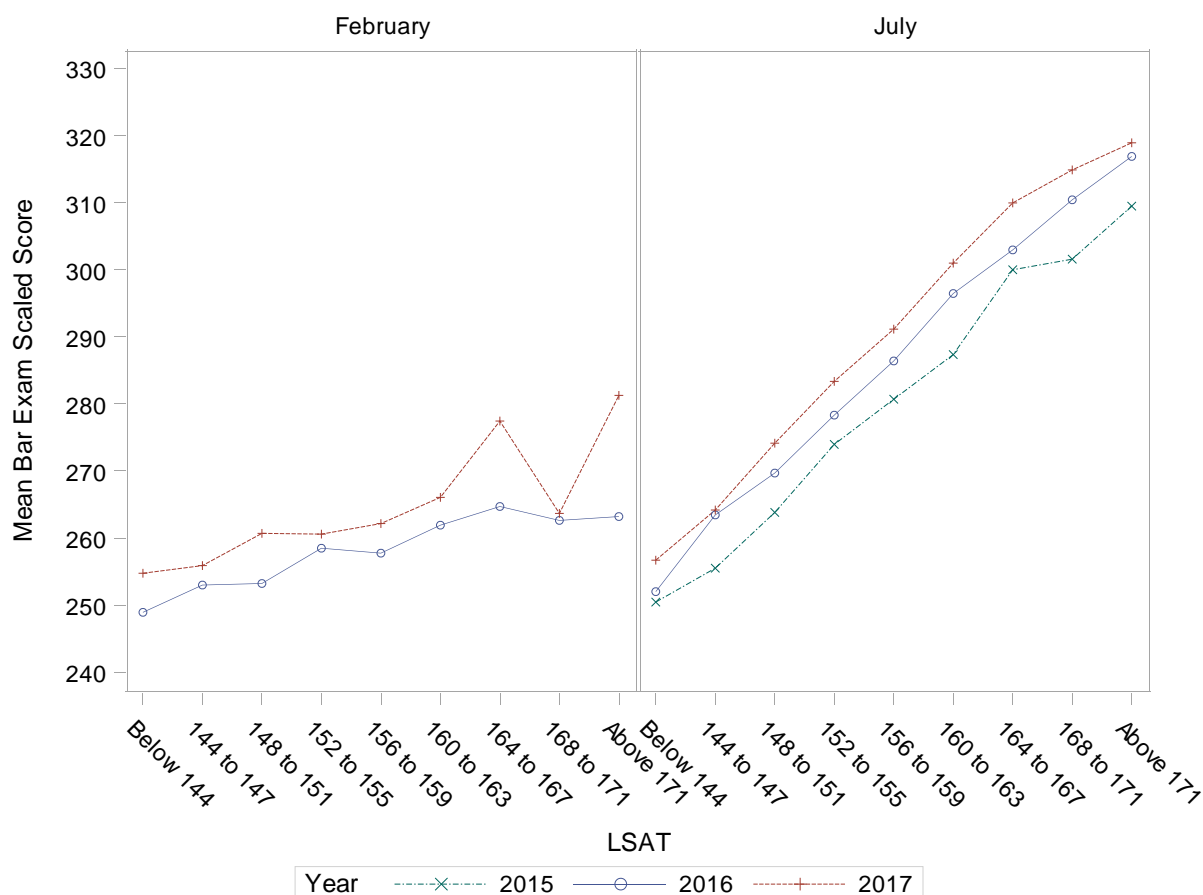**School-based Sample**

Figure 3.5.4
Mean Bar Exam Scaled Scores at Particular Ranges of LSAT Scores
School-based Sample

Similar patterns continued for 4-point LGPA, which (a) had a positive relationship with bar exam scores, (b) had a stronger relationship with bar exam scores for July candidates than for February candidates, and (c) even after accounting for 4-point LGPA, candidates from more recent bar exams tended to score higher, on average, compared to previous bar exams. Despite a few exceptions for specific 4-point LGPA groups, average bar exam scores showed overall increases across 4-point LGPA groups as 4-point LGPA scores increased. It is worth mentioning that for the "3.70 to 3.89" and "Above 3.89" 4-point LGPA groups in February, there were too few candidates to interpret the results in a meaningful way (the groups included 1 to 5 candidates), but we've included these groups in Table 3.5.3, Figure 3.5.5, and Figure 3.5.6 for completeness. Ignoring the small sample sizes for the two highest 4-point LGPA groups in February, the average bar exam scores February 2016 tended to increase and then leveled off at 4-point LGPA groups above 3.49. In July, other than a slight dip between the lowest and second lowest 4-point LGPA groups in 2015 and 2016, average bar exam scores increased briskly as 4-point LGPAs increased. Average bar exam score increased by 4.39 to 15.23 points across 4-point LGPA groups, or, put another way, for each roughly 0.2 point increase in 4-point LGPA, we

would expect bar exam scores to increase by between 4.39 and 15.23 points (or about a 10.8 point increase on average[31]). This is not to say that the relationship between 4-point LGPA and bar exam scores was absolute for individual candidates; some candidates may have higher 4-point LGPAs and end up scoring lower than expected on the bar exam (or vice versa). However, there was a positive relationship between 4-point LGPA and bar exam scores that indicated that it was reasonable to expect a higher bar exam score if a candidate received a higher 4-point LGPA.

Table 3.5.3
Bar Exam Scaled Score Means and Standard Deviations
at Particular Ranges of 4-point LGPAs
School-based Sample

	February 2016 Bar Exam			February 2017 Bar Exam			July 2015 Bar Exam			July 2016 Bar Exam			July 2017 Bar Exam		
	Mean	(SD)	N	Mean	(SD)	N	Mean	(SD)	N	Mean	(SD)	N	Mean	(SD)	N
Below 2.50	244.40	(18.11)	28	251.24	(23.71)	25	247.08	(17.01)	29	250.11	(23.42)	45	249.96	(30.02)	28
2.50 to 2.69	250.84	(20.86)	39	249.77	(18.97)	48	245.85	(19.50)	50	248.89	(22.49)	94	262.33	(26.14)	94
2.70 to 2.89	250.32	(15.73)	104	259.50	(20.52)	144	255.49	(24.82)	146	264.12	(23.12)	323	266.72	(25.24)	243
2.90 to 3.09	255.96	(18.05)	147	259.07	(16.85)	212	264.12	(24.84)	285	272.11	(25.77)	677	277.45	(26.85)	550
3.10 to 3.29	262.53	(19.15)	135	264.58	(19.27)	178	277.78	(23.57)	473	283.91	(25.09)	1001	290.44	(26.02)	778
3.30 to 3.49	262.87	(21.51)	51	268.43	(18.98)	80	290.19	(22.96)	444	295.75	(24.04)	995	301.40	(23.09)	832
3.50 to 3.69	262.37	(20.80)	27	274.18	(20.40)	28	301.26	(22.08)	364	305.96	(22.39)	794	311.37	(22.21)	672
3.70 to 3.89	263.40	(8.20)	2	272.60	(14.12)	5	313.04	(18.42)	207	315.85	(19.83)	413	321.99	(20.05)	399
Above 3.89	261.20	.	1	281.67	(20.65)	3	321.11	(19.61)	86	327.96	(18.19)	178	332.59	(19.08)	157

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[31] Across years and excluding two groups where scores decreased. The average would be about 9.8 if the two groups where scores decreased were included in the calculation.

Figure 3.5.5
Boxplots of Bar Exam Scaled Scores at Particular Ranges of 4-point LGPAs
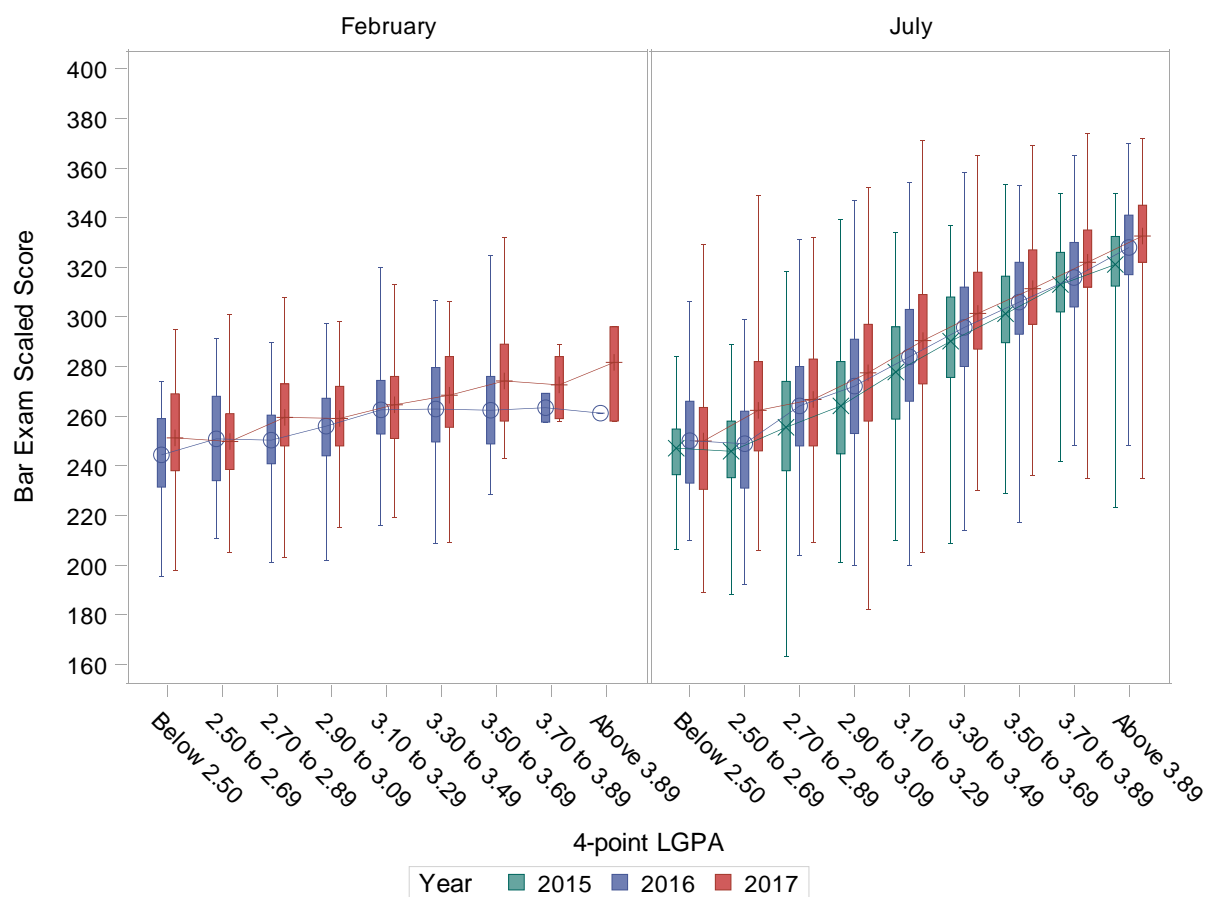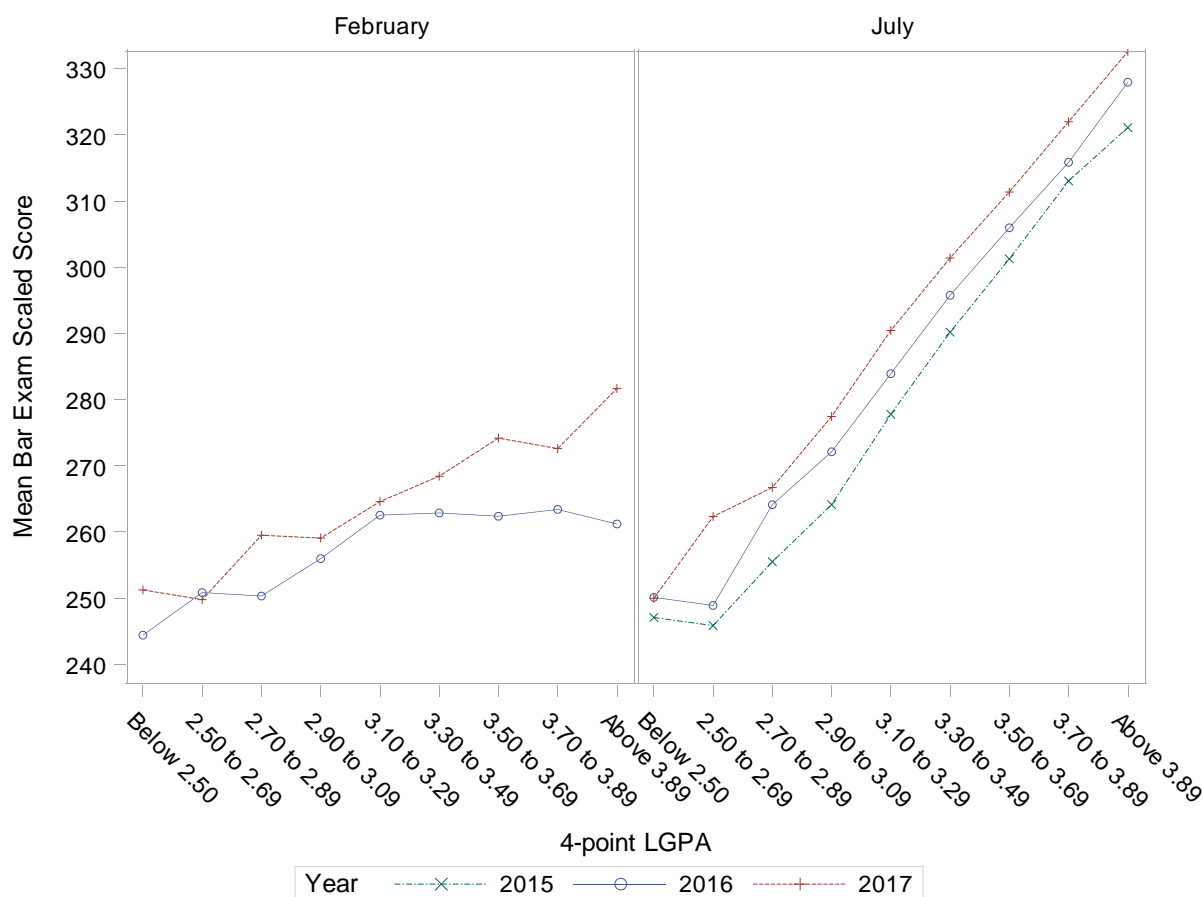**School-based Sample**

Figure 3.5.6
Mean Bar Exam Scaled Scores at Particular Ranges of 4-point LGPAs
School-based Sample

The patterns in the relationship of Index-based LGPA with bar exam scores were consistent with other background characteristics, including 4-point LGPA, in that they (a) had a positive relationship with bar exam scores, (b) had a stronger relationship with bar exam scores for July candidates than for February candidates, and (c) even after accounting for Index-based LGPA, candidates from more recent bar exams tended to score higher, on average, compared to previous bar exams. One distinction with Index-based LGPAs was that the differences across bar exams were smaller than those observed for UGPA, LSAT score, and 4-point LGPA (see Table 3.5.4, Figure 3.5.7, and Figure 3.5.8).

Similar to 4-point LGPA groups, for the two highest Index-based LGPA groups ("10.50 to 10.99" and "11.00 or Above") in February, there were too few candidates to interpret the results in a meaningful way (the groups included 1 to 7 candidates). Ignoring the small sample sizes for the two highest 4-point LGPA groups in February, the average bar exam scores consistently increased. Average bar exam score increased by 3.19 to 13.20 points across Index-based LGPA groups. In July, the average bar exam scores consistently increased (between 3.39

and 16.53 points) and, with the exception of the "Below 8.00 groups" in 2016 and 2017, showed a consistent pattern of differences with 2017 average bar exam scores slightly higher than 2016, which was slightly higher than 2015. Similar to the other background characteristics, after accounting for LGPA, differences in bar exam scores remained. However, for Index-based LGPA the remaining differences in average bar exam scores across bar exam administration were not as large as those for the other background characteristics. These smaller remaining differences were likely due to the fact that Index-based LGPA also accounted for law school-level differences in UGPA and LSAT scores, in addition to LGPAs, which meant that school-level UGPA and LSAT effects were taken into account by Index-based LGPA.[32]

Table 3.5.4
Bar Exam Scaled Score Means and Standard Deviations
at Particular Ranges of Index-based LGPAs
School-based Sample

	February 2016			February 2017			July 2015			July 2016			July 2017		
	Bar Exam			Bar Exam			Bar Exam			Bar Exam			Bar Exam		
	Mean	(SD)	N	Mean	(SD)	N	Mean	(SD)	N	Mean	(SD)	N	Mean	(SD)	N
Below 8.00	241.37	(19.30)	33	243.38	(17.32)	37	238.02	(16.46)	40	244.63	(17.36)	59	243.05	(18.34)	38
8.00 to 8.49	249.01	(16.65)	108	250.82	(19.23)	123	245.26	(18.27)	143	248.02	(18.85)	202	249.07	(19.04)	145
8.50 to 8.99	255.65	(17.50)	181	258.84	(16.41)	210	256.40	(18.98)	248	259.82	(20.86)	485	261.68	(21.65)	317
9.00 to 9.49	259.91	(17.07)	134	264.97	(17.62)	211	269.84	(20.05)	337	272.77	(20.84)	732	275.48	(21.99)	495
9.50 to 9.99	268.08	(18.60)	53	271.70	(18.25)	102	286.37	(21.73)	366	288.68	(21.46)	884	290.90	(20.27)	630
10.00 to 10.49	271.27	(20.70)	18	278.40	(20.46)	30	298.13	(19.96)	406	300.56	(20.25)	892	304.20	(20.75)	807
10.50 to 10.99	284.47	(39.12)	6	284.14	(20.47)	7	306.91	(18.31)	331	311.82	(17.88)	814	314.14	(18.69)	822
11.00 or Above	248.80	.	1	280.67	(18.82)	3	318.23	(16.61)	213	325.37	(17.82)	452	328.82	(18.72)	499

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[32] More sophisticated analysis that statistically accounts for background characteristics is provided in Section 7 and Appendix O.

Figure 3.5.7
Boxplots of Bar Exam Scaled Scores at Particular Ranges of Index-based LGPAs
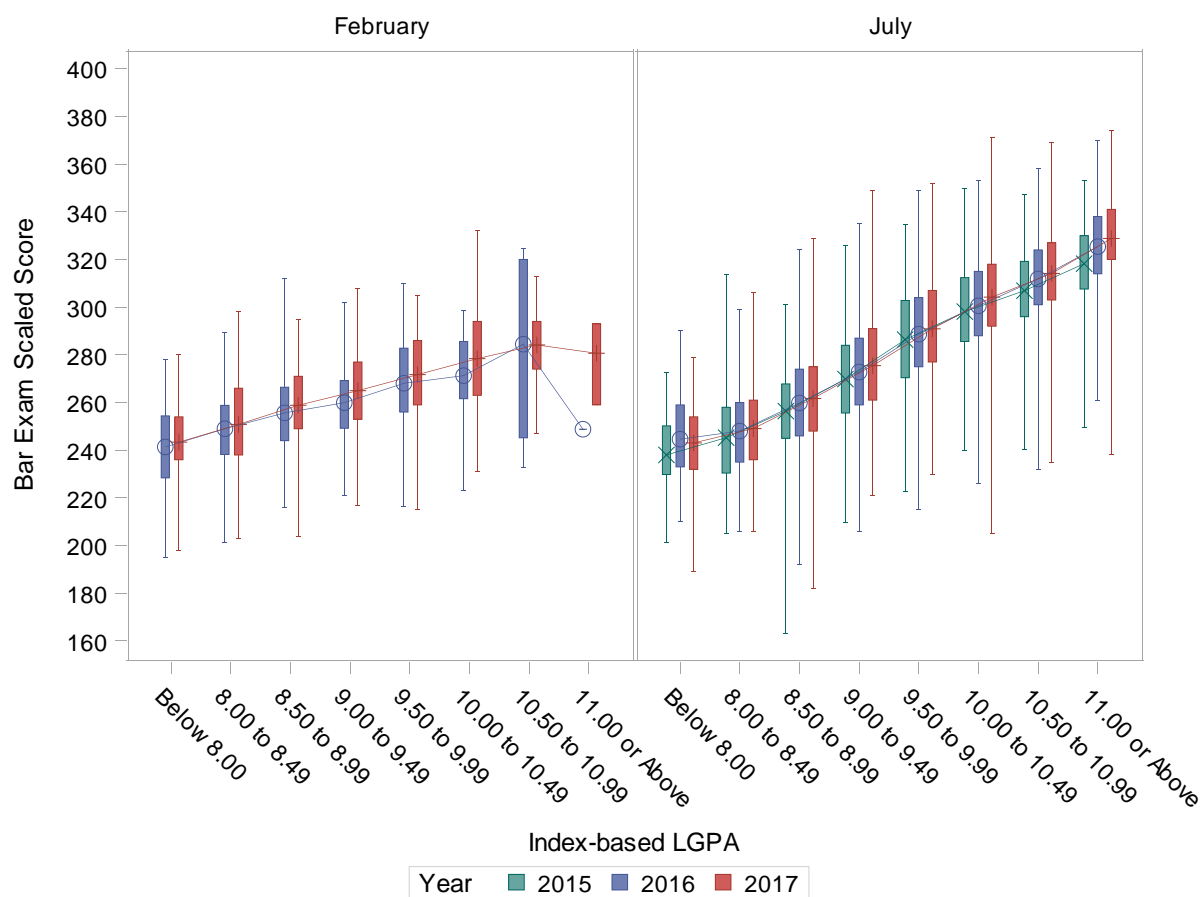**School-based Sample**

Figure 3.5.8
Mean Bar Exam Scaled Scores at Particular Ranges of Index-based LGPAs
School-based Sample
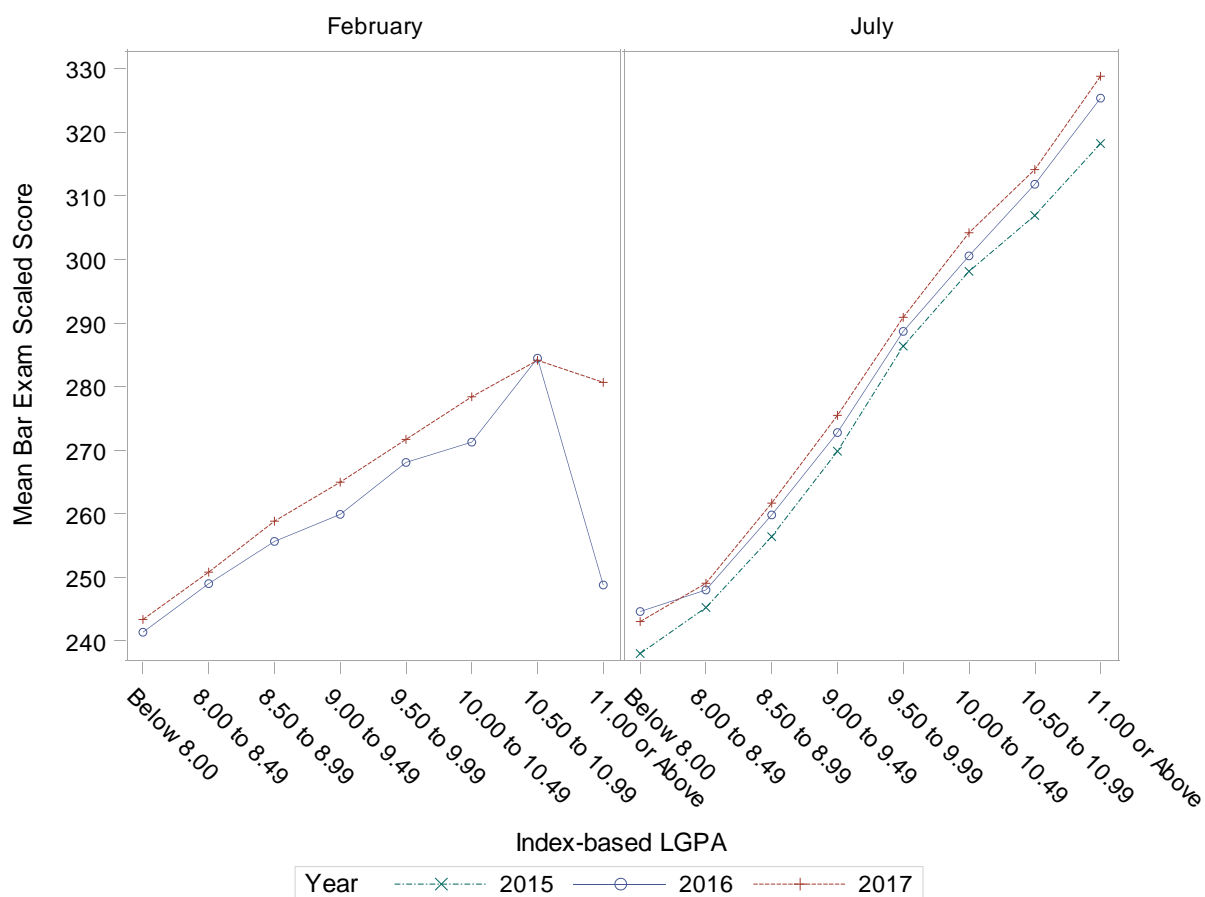
Each of the background characteristics considered (UGPA, LSAT score, 4-point LGPA, and Index-based LGPA) increased as bar exam score increased, which illustrated that each had a positive relationship with bar exam scores. It was interesting that February relationships did not appear as strong as July relationships, which was consistent with the general pattern that February results tended to be different from July, although the February school-based sample may not have well represented domestic-educated New York candidates. It was also clear that each background characteristic did not fully account for differences in bar exam performance across administrations; differences in average bar exam scores remained across bar exam for candidates with comparable background characteristics. It may be that a combination of background characteristics would better account for differences in bar exam scores or that some unaccounted for variable (or variables) contributed to differences across bar exams. It is unlikely that the differences across bar exam administrations after accounting for background

characteristics were due solely somehow to UBE adoption.[33] But, if one wanted to entertain the possibility that the residual differences after accounting for each background characteristic separately were somehow due to the UBE, which, again, we do not think is supported by the data, it would mean that, if anything, the UBE was in effect easier than the previous New York bar exam because candidates tended to score higher, on average, after UBE adoption.

3.6 Performance on Background Characteristics by Pass Rates

In this section, performance on background characteristics (UGPA, LSAT, and LGPA) were compared to pass rates for the entire school-based sample of candidates taking the bar exam in New York between July 2015 and July 2017. Similar to section 3.5, preliminary analysis indicated that the general pattern of results showing the relationship between background characteristics and pass rates by binning values on background characteristics were similar for the entire school-based sample and first-time takers only. Therefore, we only presented the results for the entire school-based sample.[34] Given that passing performance is based on bar exam scores, the results for pass rates were generally commiserate with those studying bar exam scores in section 3.5. Specifically, background characteristics (a) had a positive relationship with pass rate, (b) had a stronger relationship with pass rate for July compared to February, and (c) even after accounting for a particular background characteristic, more recent bar exam pass rates tended to be higher than previous bar exam pass rates.

Table 3.6.1 and Figure 3.6.1 contain pass rates for groupings of UGPAs. While the pattern was jagged in places (specifically for February) and some of the groupings had relatively few candidates (e.g., the highest UGPA group in February), pass rates increased overall as UGPA increased. As was observed throughout section 3.5, the July results were more consistent than February and showed steeper increases by UGPA group. In July, pass rates increased from 33.8% in 2015, 50.0% in 2016, and 50.6% in 2017 for the UGPA group "Below 2.50" to 91.7% in 2015, 94.3% in 2016, and 97.2% for the UGPA group "Above 3.89". In February, pass rates started at 12.8% in 2016 and 33.9% in 2017 and peaked at 45.2% in 2016 and 64.9% in 2017. For each UGPA group, the average pass rate was highest for 2017, followed by 2016, then 2015, which indicates that after accounting for UGPA, there were still differences in pass rates across bar exams.

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[33] While not reported here, we conducted similar analysis with background characteristics and MBE scores, which was a consistent component of the bar exam before and after UBE adoption, and found positive relationships between background characteristics and average MBE scores and observed differences in average MBE scores across bar exam administrations after accounting for each background characteristic, similar to bar exam scores studied throughout this section.

[34] As might be expected, first-time takers did tend to have higher pass rates and higher scores on background characteristics compared to the entire school-based sample.

Table 3.6.1
Pass Rate at Particular Ranges of UGPAs
School-based Sample

	February 2016		February 2017		July 2015		July 2016		July 2017	
	Pass		Pass		Pass		Pass		Pass	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Below 2.50	12.8%	39	33.9%	59	33.8%	65	50.0%	136	50.6%	83
2.50 to 2.69	23.3%	43	33.3%	39	36.8%	57	54.8%	115	62.3%	77
2.70 to 2.89	19.3%	57	36.1%	72	46.2%	106	56.1%	198	58.8%	153
2.90 to 3.09	16.7%	78	38.9%	108	52.8%	176	66.9%	411	71.7%	272
3.10 to 3.29	31.5%	89	42.5%	127	61.7%	240	71.2%	577	74.2%	387
3.30 to 3.49	26.3%	80	41.8%	134	76.0%	358	79.9%	793	83.0%	619
3.50 to 3.69	40.7%	91	64.9%	111	78.8%	481	84.3%	988	90.0%	890
3.70 to 3.89	45.2%	42	56.7%	60	89.4%	444	91.7%	950	94.9%	921
Above 3.89	33.3%	15	38.5%	13	91.7%	157	94.3%	352	97.2%	351

Figure 3.6.1
Pass Rates at Particular Ranges of UGPAs
School-based Sample
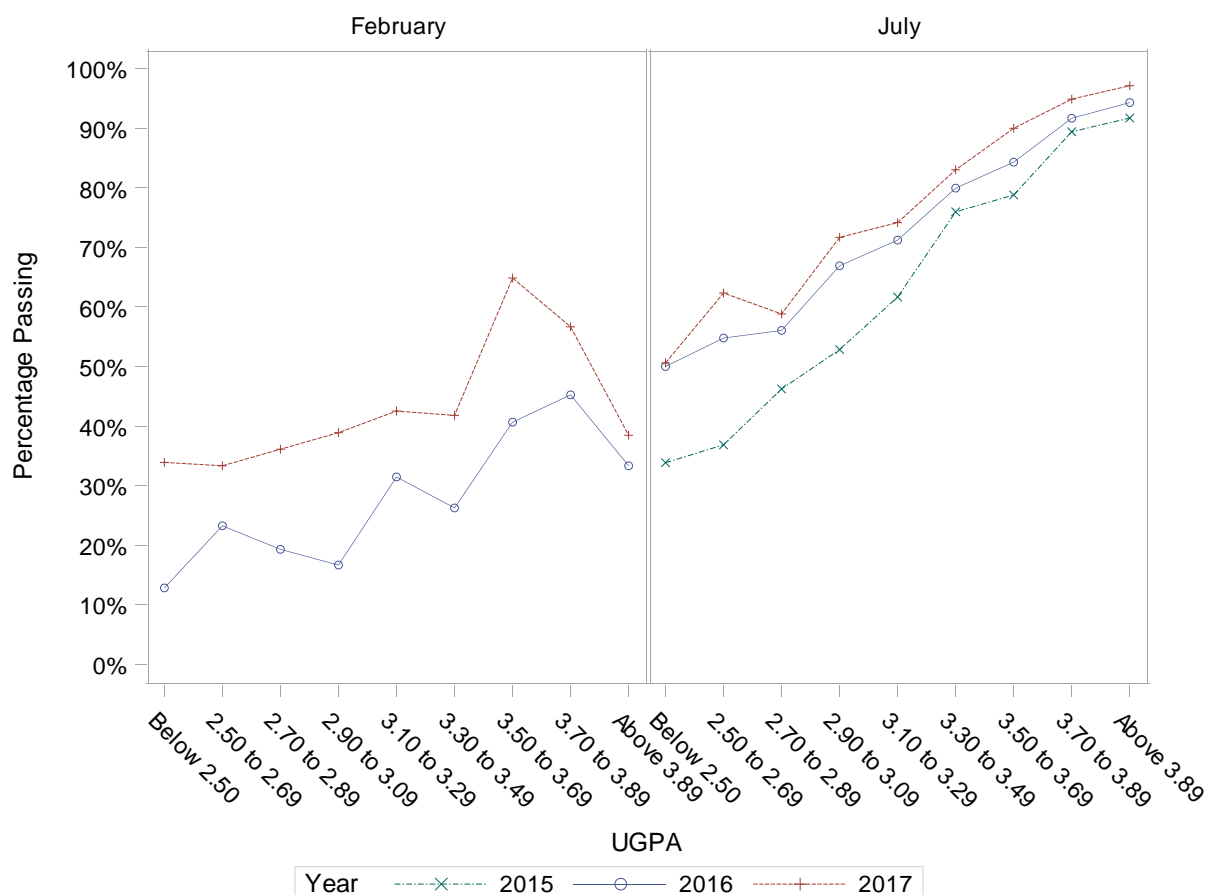
Similar to UGPAs, LSAT scores had a positive relationship with pass rates, had stronger relationships in July compared to February, and did not account entirely for differences in pass rates across bar exam administration. Table 3.6.2 and Figure 3.6.2 contain pass rates for groupings of LSAT scores. The pattern was jagged in some places in February, with some of the groupings having relatively few candidates, but pass rates generally increased as LSAT score increased. As was observed throughout section 3.5, the July results were more consistent than February and showed consistent increases by LSAT group that were steep for lower levels of LSAT scores and flattened out at high LSAT scores as pass rates approached a maximum pass rate of 100%.[35] In July, pass rates increased from 23.0% in 2015, 27.6% in 2016, and 36.6% in 2017 for the LSAT group "Below 144" to 96.6% in 2015, 97.2% in 2016, and 98.2% for the LSAT group "Above 171". In February, pass rates started at 17.5% in 2016 and 30.2% in 2017 and peaked at 50.0% in 2016 and 73.7% in 2017 (for LSAT groups with more than 20 candidates). For each LSAT group, the average pass rate was highest for 2017, followed by

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[35] This flattening out is to be expected when pass rates approach the maximum possible of 100%.

2016, then 2015, which indicates that after accounting for LSAT score, there were still differences in pass rates across bar exams.

Table 3.6.2
Pass Rate at Particular Ranges of LSAT Scores
School-based Sample

	February 2016		February 2017		July 2015		July 2016		July 2017	
	Pass		Pass		Pass		Pass		Pass	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Below 144	17.5%	40	30.2%	43	23.0%	61	27.6%	87	36.6%	93
144 to 147	19.7%	66	34.8%	112	35.5%	110	45.4%	240	50.5%	184
148 to 151	21.6%	125	39.9%	168	44.0%	209	58.2%	512	65.6%	349
152 to 155	30.2%	126	46.2%	171	60.3%	315	69.8%	723	74.9%	471
156 to 159	32.1%	78	47.3%	110	71.3%	310	78.0%	683	85.7%	539
160 to 163	37.0%	46	53.1%	49	79.9%	283	88.3%	634	91.6%	559
164 to 167	50.0%	28	73.7%	38	90.7%	333	94.1%	717	96.4%	666
168 to 171	27.8%	18	38.1%	21	94.1%	255	96.5%	571	96.4%	505
Above 171	42.9%	7	90.9%	11	96.6%	208	97.2%	353	98.2%	387

Figure 3.6.2
Pass Rates at Particular Ranges of LSAT Scores
School-based Sample
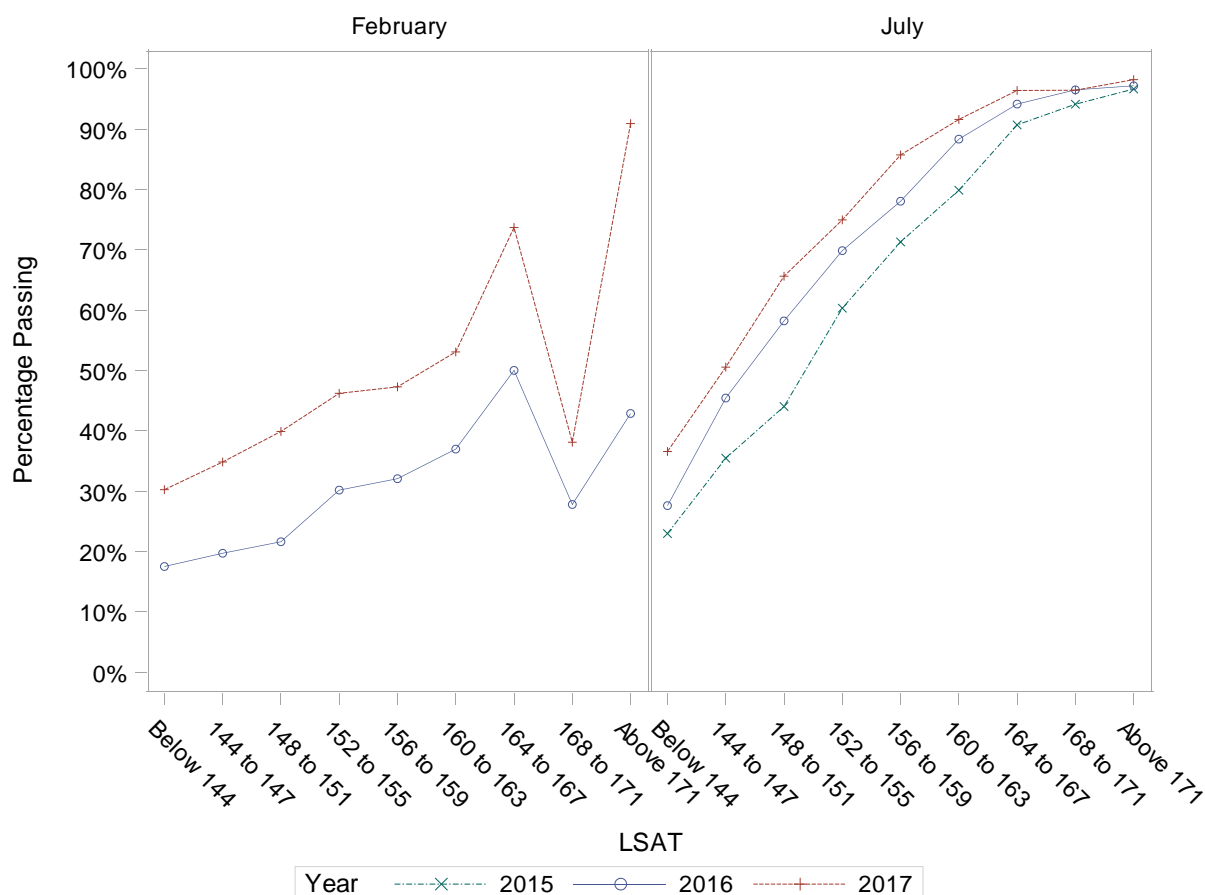
Consistent with the results above for LSAT scores, 4-point LGPAs had a positive relationship with pass rates, had stronger relationships in July compared to February, and did not account entirely for differences across bar exam administrations. Table 3.6.3 and Figure 3.6.3 contain pass rates for groupings of 4-point LGPAs. The pattern of pass rates by 4-point LGPA group was jagged in places (specifically for the two highest groups in February and the lowest groups in July 2016) and some of the groupings had relatively few candidates (e.g., the two highest groups in February), but pass rates increased overall as 4-point LGPA increased. The July results were more consistent than February and showed increases by 4-point LGPA group that were steeper for lower levels of 4-point LGPAs and flattened out at high 4-point LGPAs as pass rates approached the maximum possible pass rate of 100%. In July, pass rates increased from 10.3% in 2015, 26.7% in 2016, and 25.0% in 2017 for the 4-point LGPA group "Below 2.50" to 98.8% in 2015, 98.9% in 2016, and 99.4% for the 4-point LGPA group "Above 3.89". In February, pass rates started at 3.6% in 2016 and 28.0% in 2017 and peaked at 40.7% in 2016 and 71.4% in 2017 (for groups with more than 20 candidates). For most 4-point LGPA groups,

the average pass rate was highest for 2017, followed by 2016, then 2015, which indicates that after accounting for 4-point LGPA, there were still differences in pass rates across bar exams.

Table 3.6.3
Pass Rate at Particular Ranges of 4-point LGPAs
School-based Sample

	February 2016		February 2017		July 2015		July 2016		July 2017	
	Pass		Pass		Pass		Pass		Pass	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Below 2.50	3.6%	28	28.0%	25	10.3%	29	26.7%	45	25.0%	28
2.50 to 2.69	30.8%	39	18.8%	48	14.0%	50	23.4%	94	40.4%	94
2.70 to 2.89	11.5%	104	41.0%	144	32.2%	146	48.0%	323	51.9%	243
2.90 to 3.09	26.5%	147	39.2%	212	46.7%	285	59.8%	677	68.5%	550
3.10 to 3.29	38.5%	135	51.7%	178	68.9%	473	77.4%	1001	85.1%	778
3.30 to 3.49	41.2%	51	58.8%	80	86.5%	444	89.0%	995	93.3%	832
3.50 to 3.69	40.7%	27	71.4%	28	92.0%	364	95.3%	794	97.6%	672
3.70 to 3.89	50.0%	2	60.0%	5	99.0%	207	99.3%	413	98.7%	399
Above 3.89	0.0%	1	66.7%	3	98.8%	86	98.9%	178	99.4%	157

Figure 3.6.3
Pass Rate at Particular Ranges of 4-point LGPAs
School-based Sample
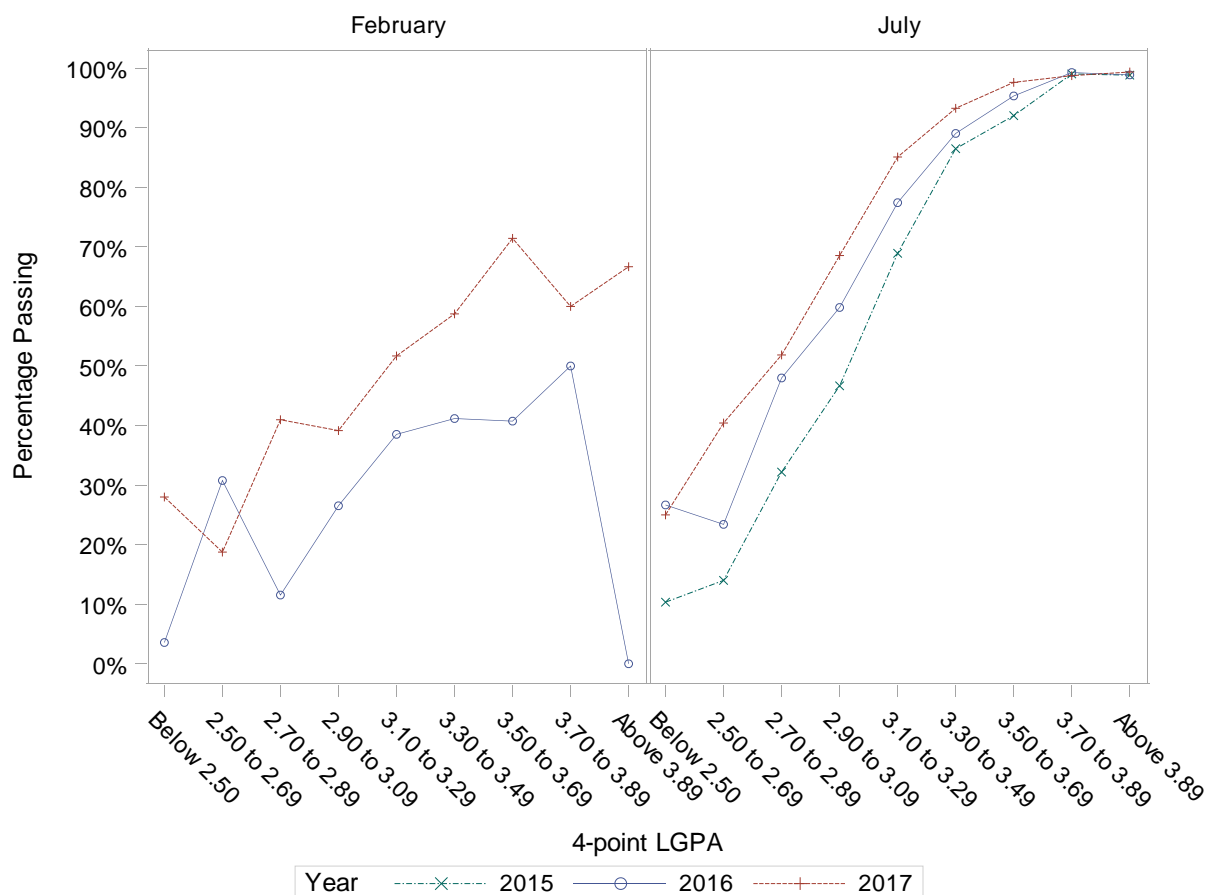
The general trends for Index-based LGPAs were similar to other background characteristics. Index-based LGPAs had a positive relationship with pass rates, had stronger relationships in July compared to February, and did not account entirely for differences across bar exam administration. Of note, however, is that, the differences across bar exam administration for Julys were smaller than other background characteristics. Table 3.6.4 and Figure 3.6.4 contain pass rates for groupings of Index-based LGPAs. Again we see that the pattern was jagged for the two highest groups in February where groupings had few candidates (between 1 and 7 candidates). With the exception of the Index-based LGPA groupings that had few candidates, pass rates increased as Index-based LGPA increased. In July, pass rates increased from 2.5% in 2015, 10.2% in 2016, and 10.5% in 2017 for the Index-based LGPA group "Below 8.00" to 99.5% in 2015, 99.6% in 2016, and 99.4% for the Index-based LGPA group "11.00 or Above". In February, pass rates started at 6.1% in 2016 and 8.1% in 2017 and

peaked at 50.9% in 2016 and 70.0% in 2017 (for groups with close to or more than 20 candidates). For almost all Index-based LGPA groups, the average pass rate was highest for 2017, followed by 2016, then 2015, so there were still differences in pass rates across bar exam after accounting for Index-based LGPA.

Table 3.6.4
Pass Rate at Particular Ranges of Index-based LGPAs
School-based Sample

| | February 2016 | | February 2017 | | July 2015 | | July 2016 | | July 2017 | |
| | Pass | | Pass | | Pass | | Pass | | Pass | |
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Below 8.00	6.1%	33	8.1%	37	2.5%	40	10.2%	59	10.5%	38
8.00 to 8.49	13.9%	108	25.2%	123	15.4%	143	18.3%	202	20.0%	145
8.50 to 8.99	26.0%	181	38.1%	210	29.4%	248	40.6%	485	47.3%	317
9.00 to 9.49	31.3%	134	51.2%	211	60.8%	337	65.6%	732	71.7%	495
9.50 to 9.99	50.9%	53	69.6%	102	82.2%	366	86.2%	884	90.0%	630
10.00 to 10.49	66.7%	18	70.0%	30	95.6%	406	96.2%	892	96.4%	807
10.50 to 10.99	66.7%	6	85.7%	7	97.6%	331	99.3%	814	98.9%	822
11.00 or Above	0.0%	1	66.7%	3	99.5%	213	99.6%	452	99.4%	499

In this section, pass rates by groupings of each background characteristic reiterated the results in section 3.5 that contained average bar exam scores by the same groupings. Relationships between pass rates and background characteristics were positive at each bar exam and more recent bar exam administrations tended to perform better even after accounting for background characteristics. Relationships between more proximal background characteristics (LGPA) and pass rate were stronger than more distal background characteristics (UGPA).

Figure 3.6.4
Pass Rate at Particular Ranges of Index-based LGPAs
School-based Sample
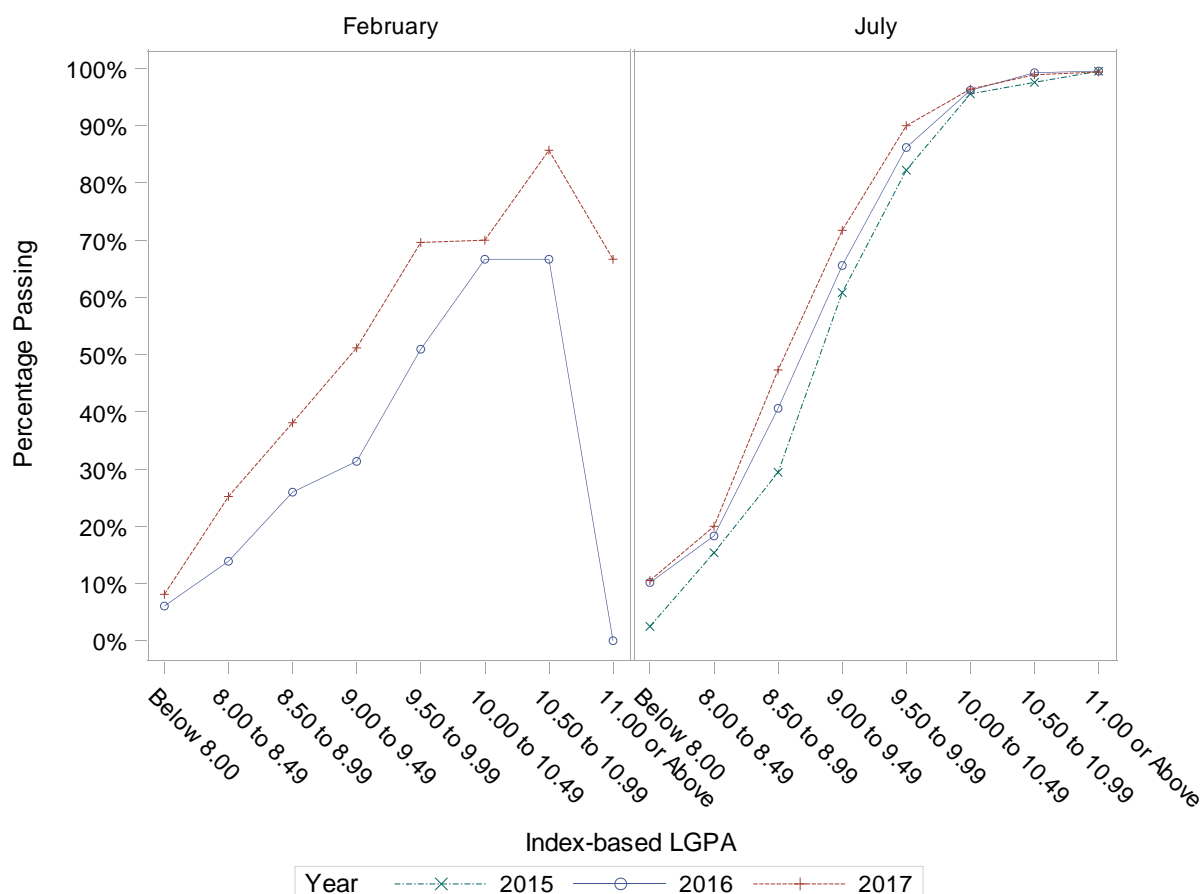
3.7 Correlations between Background Characteristics and Performance on the Bar Exam

As mentioned in section 3.1, one way to succinctly quantify and summarize the linear relationship between variables is with correlation coefficients. Correlation coefficients[36] take values that fall between -1 and 1. The sign, negative or positive, indicates the direction of the relationship (negative is a negative relationship, positive is a positive relationship) and the magnitude of the value, between 0 and 1 or 0 and -1, indicates the strength of the relationship (1 indicating the strongest possible positive relationship and -1 indicating the strongest possible negative relationship). The tables below include correlations for the entire school-based sample (Table 3.7.1) and first-time takers only (Table 3.7.2). Given the results in section 3.5, which studied the relationships between background characteristics and bar exam scores, the

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[36] We used Pearson correlation coefficients, which summarize the linear relationship between variables.

correlations provided below should not be surprising, although we did not include first-time takers in the analysis in sections 3.5 or 3.6 because the patterns of results were generally comparable to the entire school-based sample.

There are a few things to note about the correlation tables. First, they include MBE and written components in addition to bar exam scores, UGPA, LSAT scores, 4-point LGPA, and Index-based LGPA. Second, the correlation tables include MBE, written, and bar exam scores in the columns and background characteristics (UGPAs, LSAT scores, LGPAs) plus bar exam scores in the rows, which means that the correlations among background characteristics were not included here (see section 7.2 for tables that contain these correlations). Third, because the bar exam scores were included in the rows and columns of the tables, the cells associated with correlations between the bar exam scores and itself are always 1 (a variable is perfectly correlated with itself; see the cells with ones in the last row of Table 3.7.1 and 3.7.2). Fourth, the sample sizes for February first-time takers are relatively small (with 85 candidates in February 2016 and 92 candidates in February 2017), so we would not put too much emphasis on these correlations because the correlations may be somewhat unstable for February first-time takers.[37] Finally, the columns in the tables group correlations for February 2016 and 2017 together (left portion of the tables) and July 2015, 2016, and 2017 together (right portion of the tables).

For example, in Table 3.7.1, if we look at the row listing UGPA, we can see that the correlations with the MBE for Februarys were .15 in 2016 and .15 in 2017 and for Julys were .43 in 2015, .37 in 2016, and .43 in 2017. Likewise, the correlations between UGPA and written scores were .21 and .20 for Februarys and between .37 and .41 for Julys. Correlations between UGPA and bar exam scores were .21 for Februarys and between .40 and .46 for Julys. All of these correlations indicate meaningful relationships between variables, but the correlations in February were always smaller (by at least half) compared to the correlations in July.

Almost all of the other correlations in Table 3.7.1 indicate meaningful relationships between background characteristics and MBE, written, and bar exam scores. The only correlation observed in Table 3.7.1 that was negligible was the .06 correlation between LSAT scores and written scores in February 2016, which was surprisingly low. In general, February correlations were always smaller than July. These low correlations were likely due largely to the group of candidates testing in February, which consisted of a majority of candidates that were repeat takers and led to bar exam scores that had a restricted range compared to July and likely contributed to lower correlations in February.[38] Repeat takers have already not passed the bar exam and many of them may improve their scores upon repeat testing but, overall, there will be relatively fewer candidates represented at high bar exam scores (i.e., those well above the passing score). In addition, as we have seen in section 3.2, February candidates tended to have

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[37] We typically prefer to have at least 100 candidates when estimating Pearson correlations.
[38] Another way of saying this is that the correlations were attenuated due to restriction of range.

lower UGPAs, LSAT scores, and LGPAs, on average compared to July candidates and this was also true of February first-time takers only, so even first-time takers testing in February appeared to be different from July first-time takers; this may have been due to the group of candidates available in the school-based sample, which may not have adequately represented February domestic-educated candidates in New York. The differences in February candidates compared to July candidates were reflected in the correlations between background characteristics and bar exam scores, similar to the pattern of lower performance on background characteristics and on the bar exam.

In Table 3.7.1, the correlations with background characteristics for MBE, written, and bar exam scores were in the same ballpark across the two February exams and across the three July exams (with the exception of the correlation between LSAT and written scores in February 2016). In other words, the MBE, written, and bar exam correlations with background characteristics for the July exams (or February exams) were not identical across years and there may be some interesting patterns to scrutinize, but for our purposes here from the standpoint of studying relationships, they were of (mostly) similar magnitude for the entire school-based sample. Because the primary question of interest is how background characteristics relate to bar exam scores, in the remainder of our review of these correlations, we will limit ourselves to the correlations between background characteristics and bar exam scores.

UGPA, LSAT score, 4-point LGPA, and Index-based LGPA all had positive correlations with bar exam scores. Interestingly, for Februarys and for Julys the correlations across years did not differ too much. For example, the correlation between Index-based LGPA and bar exam scores in February was .38 and .44 for 2016 and 2017 and in July was .76, .75, and .75 for 2015, 2016, and 2017; the correlations between background characteristics and bar exam scores were comparable before and after UBE adoption. Another interesting pattern in Table 3.7.1 was in the magnitude of correlations across UGA, LSAT score, 4-point LGPA, and Index-based LGPA. Regardless of whether we are looking at February or July candidates, the correlations with bar exam scores were lowest for UGPA (.21 for February and between .40 and .46 for July), a bit higher for LSAT score (.21 and .24 for February and .56 or .57 for July), higher for 4-point LGPA (.27 or .28 for February and .61 or .65 for July), and highest for Index-based LGPA (.38 or .44 for February and .75 or .76 for July).[39] More proximal background characteristics, like LGPA, had stronger relationships with bar exam scores than more distal background characteristics, like LSAT score or UGPA. Patterns like this are consistent with other research that has included these relationships, including previous studies conducted with New York data.

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[39] We would expect Index-based LGPAs to have higher correlations with bar exam scores because they take into account law school level selectivity, which allows for variation due to school in candidate LGPA across schools. 4-point LGPAs, on the other hand, essentially eliminate differences among law schools by rescaling LGPAs to a similar four-point scale, which suppresses variation due to school in candidate LGPAs across schools.

Table 3.7.1
Correlations among UGPA, LSAT Scores, LGPA,
MBE, Written Scores and Bar Exam Scores
School-based Sample

| | February | | | | | | July | | | | | | | | |
| | MBE | | Written | | Bar Exam Scaled Score | | MBE | | | Written | | | Bar Exam Scaled Score | | |
	2016	2017	2016	2017	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
UGPA	.15	.15	.21	.20	.21	.21	.43	.37	.43	.41	.37	.40	.46	.40	.45
LSAT Scores	.34	.21	.06	.19	.21	.24	.63	.56	.58	.43	.48	.48	.56	.57	.57
4-point LGPA	.18	.23	.25	.24	.27	.28	.60	.58	.58	.60	.55	.55	.65	.61	.61
Index-based LGPA	.36	.36	.28	.38	.38	.44	.77	.73	.73	.65	.66	.66	.76	.75	.75
Bar Exam Scaled Score	.80	.82	.89	.85	1	1	.91	.92	.93	.94	.92	.93	1	1	1

February 2016 N = 534, February 2017 N = 723, July 2015 N = 2084, July 2016 N = 4520, July 2017 N = 3753

Table 3.7.2 contains the correlations among background characteristics and bar exam scores for first-time taker candidates in the school-based sample. First-time takers had some rather different correlations across February exams, particularly compared to the correlations across July exams. For example, the correlation between LSAT and bar exam scores was .12 in February 2016 and .54 in February 2017. As mentioned at the outset, the sample sizes for the February first-time takers were relatively small (with fewer than 100 candidates) and the group may not well represent all February domestic-educated first-time takers, which likely affected the correlations observed.[40] We will not put much emphasis on the February first-time taker

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[40] It is possible that a larger sample size would still lead to smaller correlations for the February group due to factors like restriction in range mentioned earlier. One of the things we have observed throughout this study is that the February candidates tend to be different from the July candidates.

correlations, but it is worth noting that the correlation between LSAT scores and written scores was negative for February 2016 (-.15) and that the correlation between Index-based LGPA and written scores was positive but negligible (.05).

Correlations between background characteristics and bar exam scores for July first-time takers (Table 3.7.2) were comparable to those for the entire school-based sample (Table 3.7.1). First-time taker correlations across years for July exams were also rather consistent. UGPA correlation with bar exam scores ranged from .37 to .42, LSAT correlation with bar exam scores ranged from .53 to .55, 4-point LGPA ranged from .56 to .64, and Index-based LGPA ranged from .71 to .74. Across Julys, first-time taker correlations were largest for Index-based LGPA, followed by 4-point LGPA, then LSAT scores, and UGPA. Similar to the correlations for the entire school-based sample, proximate background characteristics, like LGPA, had larger correlations with bar exam scores than more distal variables, like UGPA, and correlations were similar before and after UBE adoption.

The correlations between background characteristics and bar exam scores illustrated consistently positive relationships between background characteristics and bar exam scores. They also showed that LGPAs, specifically those that account for law school selectivity, had the strongest correlations with bar exam scores, which makes sense because LGPA is a summary of several years of training in law and is an academic performance variable that is proximate to bar exam attempt for most candidates. Of particular interest is that the correlations for July exams did not differ much before and after UBE adoption, which suggests that the UBE had similar relationships with background characteristics as the New York bar exam before UBE adoption. This is important but not necessarily unexpected because there was substantial overlap in test material and content covered on the New York bar exam before and after UBE adoption. In addition, the non-overlapping bar exam components (e.g., New York developed essay questions, the New York Multiple Choice component) have the same general goal of assessing knowledge, skills, and abilities needed by entry-level lawyers. While the exams were to some extent different, the correlations with background characteristics were not.

Table 3.7.2
Correlations among UGPA, LSAT Scores, LGPA,
MBE, Written Scores and Bar Exam Scores
First-time Takers School-based Sample

	February						July								
	MBE		Written		Bar Exam Scaled Score		MBE			Written			Bar Exam Scaled Score		
	2016	2017	2016	2017	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
UGPA	.20	.31	.14	.37	.19	.37	.40	.34	.38	.38	.34	.35	.42	.37	.40
LSAT Scores	.43	.47	-.15	.52	.12	.54	.61	.54	.55	.40	.46	.44	.53	.55	.53
4-point LGPA	.16	.25	.34	.28	.33	.29	.59	.56	.54	.59	.52	.50	.64	.59	.56
Index-based LGPA	.36	.58	.05	.61	.24	.66	.76	.70	.70	.62	.62	.61	.74	.72	.71
Bar Exam Scaled Score	.74	.91	.85	.90	1	1	.91	.92	.92	.94	.92	.92	1	1	1

February 2016 N = 85, February 2017 N = 92, July 2015 N = 1873, July 2016 N = 4070, July 2017 N = 3405

3.8 Summary

Section 3 addressed two questions: *How do candidate background characteristics compare across bar exam administrations? How do they relate to performance on the bar exam in New York before and after UBE adoption?*

The short answer to each question is that (a) candidate background characteristics, in the form of UGPAs, LSAT scores, and LGPAs, showed evidence of shifting across time for the candidates in the school-based sample taking the New York bar exam in February 2016, February 2017, July 2015, July 2016, and July 2017 and (b) background characteristics related positively to performance on the bar exam in New York before and after UBE adoption. Of course, there are nuances and interesting details embedded in the sections above that provided analysis to address these questions, but we will attempt to provide a brief summary here.

For the entire school-based sample of candidates taking the New York bar exam (which included a subset of all domestic-educated candidates), average UGPAs were similar across February 2016 and February 2017 and similar across July 2015 and July 2016 before increasing slightly in July 2017. Average LSAT scores decreased slightly across February 2016 and February 2017 and decreased across July 2015 and July 2016 before increasing in July 2017. Average 4-point LGPAs increased slightly across administrations. Index-based LGPAs increased across February exams and across July exams. First-time takers showed similar patterns for July but not for February. In general, February results appeared less stable likely due to (a) the nature of the group taking the exam in February, where most candidates are repeat takers and the first-time takers tended to be different than first-time takers in July, (b) the sample sizes in February were smaller, which may have affected the stability of results for first-time takers, and (c) candidates included in the school-based sample may not have well represented candidates taking the New York bar exam, particularly first-time takers and candidates taking the February 2016 bar exam.

Females tended to have higher average UGPAs than males at each bar exam administration. This pattern was reversed for LSAT score, 4-point LGPA, and Index-based LGPA, where males tended to have higher averages than females. Average values on background characteristics by gender tended to follow the pattern for the entire group; however, differences in means between males and females decreased slightly between July 2015 and July 2017.

Average values on background characteristics tended to differ by race/ethnicity. In July, Caucasian/White and Asian/Pacific Islander groups almost always had higher average performance on background characteristics compared to Hispanic/Latino and Black/African American groups. February results were somewhat more idiosyncratic and tended to have smaller average differences across groups. For July exams, average UGPA, LSAT score, Index-based LGPA and 4-point LGPA between 2015 and 2016 tended to (a) remain constant or

increase for Asian/Pacific Islander, Black/African American, and Hispanic/Latino groups and (b) remain constant or decrease for the Caucasian/White group. Between July 2016 and July 2017, average performance tended to increase for each group, with the exception of the Hispanic/Latino group, which had similar average UGPAs and a lower average 4-point LGPA.

Average performance on candidate background characteristics across gender and racial/ethnic groups provide an overall summary of performance for groups, and, potentially, differences in performance across groups. However, the existence of average differences across groups on variables like UGPA, LSAT score, and LGPA does not provide an appropriate context for these differences or explain why, on average, these differences exist. There are a variety of potential explanations for average differences in group performance in background characteristics that are outside the scope of the data studied in this study. For example, groups may tend to have differences in educational, psychological, social, or economic experiences that would contribute to differences in average performance on background characteristics. It is also important to mention that the average for a group is an overall summary across individuals in that group and differences in averages across groups may provide a broad sense of group-level performance but provides very limited information about individuals; differences in averages across groups are smaller than the range of performance for individuals within groups. For example, there are plenty of females with higher LGPAs than males, even though, on average males had somewhat higher LGPAs than females. Candidate background characteristics, like UGPA, LSAT score, and LGPA are useful for contextualizing bar exam performance, but they are themselves incomplete and do not provide ready explanations for average differences in the background characteristics themselves, when they are observed. Research tends to find average differences in academic achievement between gender and race/ethnicity that begins quite early in students' academic careers and continues forward. In addition, other non-academic factors likely contribute to average differences in background characteristics, but data, analysis, and review of such factors are outside the scope of this study.

Relationships between background characteristics and bar performance was positive; as background characteristics increased, so did bar exam scores and pass rates. LGPAs (Index-based followed by 4-point) had the strongest relationships with bar exam scores and pass rates, followed by LSAT score, and UPGA. Relationships did not appear to differ for July exams before and after UBE adoption. Correlations between background characteristics and bar exam scores were of comparable magnitude in July 2015, July 2016, and July 2017. It is important to reiterate that background characteristics were related to bar exam scores but the relationship was not perfect and there are likely other variables that contributed to differences in bar exam performance across bar exam administrations. One of the interesting results that the available data cannot explain is that for candidates with particular values on background characteristics, average bar exam scores still differed somewhat across years. This indicated that other factors likely contributed to a portion of the differences in bar exam performance. Accounting for differences in UGPA, LSAT scores, and UGPA together would likely further decrease

differences in bar exam scores, but it is likely that a portion would remain. In a sense, Index-based LGPA already does this by accounting for law school level differences in performance on UGPAs and LSAT scores. While remaining differences in bar exam scores across years after accounting for differences in background characteristics might be used to suggest that differences are due to the material tested by the UBE, we think that it is unlikely. We did not present the results in this study, but when background characteristics were binned and plotted against MBE scores, we still saw differences across years similar to the results above that included bar exam scores and pass rates. Because the MBE was a consistent component on bar exams across the studied time period, differences in average MBE scores after accounting for each background characteristic point to something other than the UBE as contributing to improved performance across bar exam administrations. This would be an area for further exploration because many factors outside the scope of data available in this study could contribute to remaining differences observed across bar exam administrations, including factors like changes to candidates choosing to take the bar exam in New York, changes in law school curricula, and perhaps changes in how candidates prepare for the bar exam.

In section 4 below, we studied bar exam performance by gender and race/ethnicity. The results above showing differences in background characteristics (UGPA, LSAT score, and LGPA) across groups and positive relationships between background characteristics and bar exam scores are important because they help contextualize differences in bar exam results identified next.

4. How Do Candidates Grouped by Race/Ethnicity and Gender Perform on the Bar Exam in New York Before and After UBE adoption?

4.1 Overview

In this section, the New York State Board of Law Examiners (NYSBLE) sample and the school-based sample were used to address the question *how do candidates grouped by race/ethnicity and gender perform on the bar exam in New York before and after UBE adoption*? As described in section 2, the NYSBLE sample contained all candidates taking the bar exam in New York at each exam administration and the school-based sample contained a subset of domestic-educated candidates agreeing to share their law school information from schools agreeing to release candidate information. The representativeness of the school-based sample of the total group (i.e., the domestic-educated candidates in the NYSBLE sample) is covered in section 2.3, but analysis below comparing the bar exam performance across samples can also be used to provide evidence regarding the representativeness of the school-based sample of the NYSBLE sample (see section 4.3).

Bar exam scores in New York prior to UBE adoption (i.e., prior to July 2016) consisted of the MBE, a written component, and a New York-specific multiple-choice (NYMC) component with bar exam scores on a 1,000-point scale (after each component was scaled to the MBE). To place the bar exam scores on a comparable scale before and after UBE adoption, the July 2015 and February 2016 bar exam scores were divided by 2.5 to put them on the UBE 400-point scale (see section 2.4). The passing score on the 400-point UBE scale is 266.

Comparisons below include the MBE, written component, and bar exam scores before and after UBE adoption in July 2016. The written component differed before and after UBE adoption because the UBE includes six Multistate Essay Exam (MEE) questions and two Multistate Performance Test (MPT) questions whereas the New York exam prior to UBE included five New York essays and one MPT. The bar exam differed in composition before and after UBE adoption because (a) the written component was different (it contributed 50% to the final score) and (b) the multiple-choice portion of the exam included the NYMC (weighted 10% of final the score) prior to UBE adoption. In addition, MBE scores were weighted 40% of the total score prior to UBE adoption and 50% of the total score after UBE adoption.

It is important to note that background characteristics, specifically undergraduate grade point averages (UGPAs), Law School Admission Test scores (UGPAs), and law school grade point averages (LGPAs), shifted across bar exam administration for the school-based sample (section 3). Generally speaking, performance on background characteristics tended to improve between July 2015 and July 2017, with somewhat mixed performance in July 2016. Results in February were a bit inconsistent, with performance sometimes increasing and sometimes

decreasing. There were differences across gender and race/ethnicity; while each group's performance on background characteristics tended to increase between July 2015 and July 2017, differences across groups persisted before and after UBE adoption. In section 3, the relationships between background characteristics and bar exam performance were positive; as performance on background characteristics increased, so did bar exam performance. The relationships were stronger for July exams than for February. LGPAs had the strongest relationships with bar exam scores, followed by LSAT scores and UGPAs.

Analysis of candidate bar exam performance by gender and race/ethnicity before and after UBE adoption for the NYSBLE sample is provided in section 4.2. The analysis is grouped three ways: (a) the entire sample, (b) domestic-educated, and (c) domestic-educated first-time takers. Similarly, bar exam performance by gender and race/ethnicity for the school-based sample is provided in section 4.3 with analysis grouped by (a) the entire school-based sample (which, by definition, only included domestic-educated candidates) and (b) first-time takers (which, by definition, only included domestic-educated first-time takers). Within each grouping, for each score being considered (i.e., MBE, written, bar exam, or pass rate), the analysis included a table with means and standard deviations, a figure containing boxplots (see section 3.3 for an explanation of boxplots, which summarize distributions of scores), and a figure listing the mean scores by group (and overall).[41]

To preview a couple of general findings in this section: (a) candidates summarized by gender and racial/ethnic groups tended to perform better, on average, across bar exam administrations (with some exceptions), and (b) groups tended to differ in performance on the bar exam. Performance by gender and race/ethnicity did not appear to be adversely affected by UBE adoption; average differences among groups existed before and after UBE adoption and increases in average scores were observed across groups before and after UBE adoption, particularly when considering July 2015 and July 2017 bar exams.

4.2 NYSBLE Sample Scores and Pass Rates

This section contains analysis of MBE scores, written scores, bar exam scores, and pass rates first by gender, then by race/ethnicity for the entire NYSBLE sample, for domestic-educated candidates, and for domestic-educated first-time takers.[42]

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[41] Analysis of pass rates included a table and a figure with passing percentages only.

[42] Analysis of gender by race/ethnicity is contained in Appendix G for the entire NYSBLE sample, Appendix H for domestic-educated candidates, and Appendix I for domestic-educated first-time takers. Appendix J contains analysis by gender, race/ethnicity, and gender by race/ethnicity for first-time takers in the NYSBLE sample. Appendix K contains analysis of additional racial/ethnic groups.

4.2.1 Entire NYSBLE Sample by Gender

Table 4.2.1 contains MBE score means and standard deviations by gender across bar exam administrations between July 2015 and July 2017 for the entire NYSBLE sample. Figure 4.2.1 displays boxplots of MBE scores and Figure 4.2.2 displays means of MBE scores. Figure 4.2.2 shows that males scored higher, on average, on the MBE compared to females at each bar exam. Scores for males were 3.8 and 2.7 points higher than females in Februarys and 5.8, 5.8, and 4.8 points higher than females in Julys. In addition, average scores for males and females increased across Februarys and across Julys, with female average MBE scores increasing more than males. For example, male average scores increased from 139.78 to 141.91 to 143.60 across Julys, an increase of 3.8 points between 2015 and 2017, and female average scores increased from 134.01 to 136.10 to 138.78, an increase of 4.8 points. Means for the entire group (All), included those omitting their gender, and followed a similar pattern of increasing means across bar exams. Figure 4.2.1 also illustrates the pattern in mean scores by gender across years but also shows that the 25th percentiles and 75th percentiles (the bottom and top of the box, respectively) increased across years. In addition, as was observed for background characteristics (see section 3), performance in February showed less variability in February than July, with smaller standard deviations and smaller ranges of 25th and 75th percentiles as represented by the narrower boxes in February boxplots.

Across July exams, the number of candidates decreased but decreased more rapidly for males compared to females. The drop in number of males between July 2015 and July 2016 was 172, compared to 140 for females, and the drop in number of males between July 2016 and July 2017 was 288 compared to 91 for females. Put another way, the drop in number of candidates across July exams was associated with a disproportionate decrease in the number of male candidates.

Table 4.2.1
MBE Score Means and Standard Deviations
New York State Board of Law Examiners Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	127.37	129.33	134.01	136.10	138.78
(SEM 0.2 to 0.3)	(SD)	(15.23)	(15.35)	(17.48)	(17.91)	(18.48)
	N	2245	2357	5489	5349	5258
Male	Mean	131.19	132.07	139.78	141.91	143.60
(SEM 0.3 to 0.4)	(SD)	(16.22)	(16.04)	(17.97)	(18.34)	(18.44)
	N	1854	1723	4945	4773	4485
All*	Mean	129.11	130.47	136.76	138.83	140.98
(SEM = 0.2)	(SD)	(15.81)	(15.69)	(17.92)	(18.34)	(18.63)
	N	4193	4162	10667	10297	9932

* All includes candidates omitting their gender.

Figure 4.2.1
Boxplots of MBE Scores
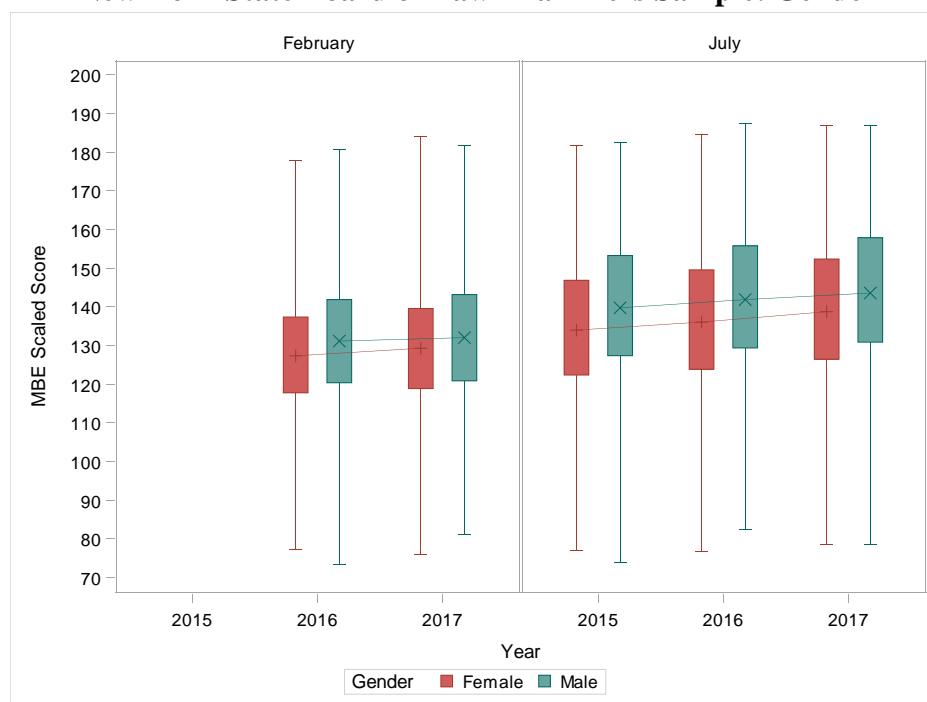**New York State Board of Law Examiners Sample: Gender**

Figure 4.2.2
Means of MBE Scores
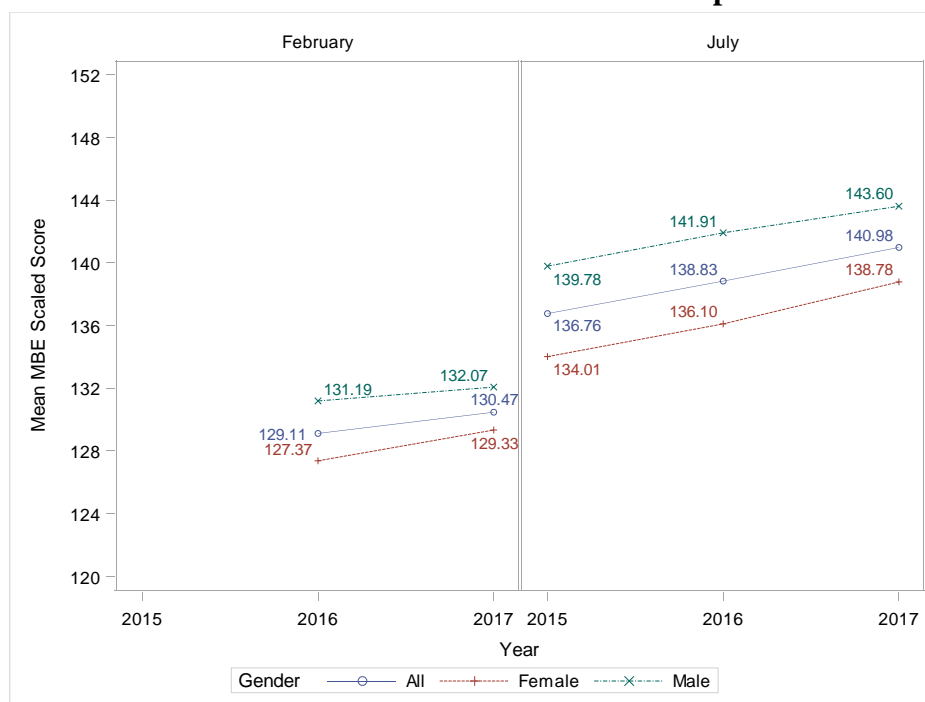**New York State Board of Law Examiners Sample: Gender**

Table 4.2.2, Figure 4.2.3, and Figure 4.2.4 contain analysis of written scores for the NYSBLE sample by gender. Average written scores for females were (a) higher than males in February 2016, February 2017, and July 2017 and (b) lower than males in July 2015 and July 2016. The difference in means between males and females increased in July 2016 compared to July 2015 and narrowed again in July 2017 (the difference in July 2015 was 0.3 and 1.1 in July 2016 favoring males, and 0.1 in July 2017 favoring females). In February, differences between males and females widened between 2016 (1.1 points) and 2017 (2.2 points), with females scoring higher than males. Across July exams, average written scores increased for males and females. Between July 2015 and July 2016, average scores for males increased 2 points compared to 1.2 points for females. Then between July 2016 and July 2017, average scores for males increased 1.7 points and females increased 2.9 points which erased the increase in difference between average written scores for males and females in July 2016.

Table 4.2.2
Written Score Means and Standard Deviations
New York State Board of Law Examiners Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	129.58	131.13	136.60	137.84	140.75
(SEM 0.2 to 0.3)	(SD)	(15.46)	(15.49)	(17.90)	(18.31)	(18.83)
	N	2245	2357	5489	5349	5258
Male	Mean	128.49	128.98	136.93	138.97	140.67
(SEM 0.3 to 0.4)	(SD)	(16.22)	(16.49)	(18.00)	(18.98)	(18.93)
	N	1854	1723	4945	4773	4485
All*	Mean	129.07	130.10	136.73	138.36	140.64
(SEM = 0.2)	(SD)	(15.80)	(15.94)	(17.93)	(18.63)	(18.91)
	N	4193	4162	10667	10297	9932

* All includes candidates omitting their gender.

Figure 4.2.3
Boxplots of Written Scores
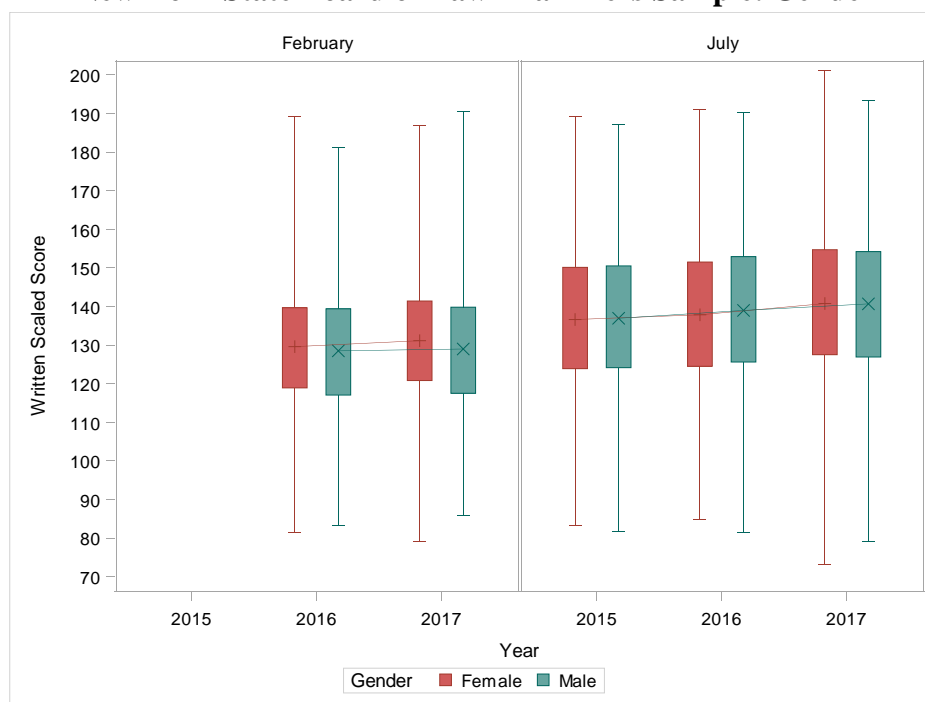**New York State Board of Law Examiners Sample: Gender**

Figure 4.2.4
Means of Written Scores
New York State Board of Law Examiners Sample: Gender
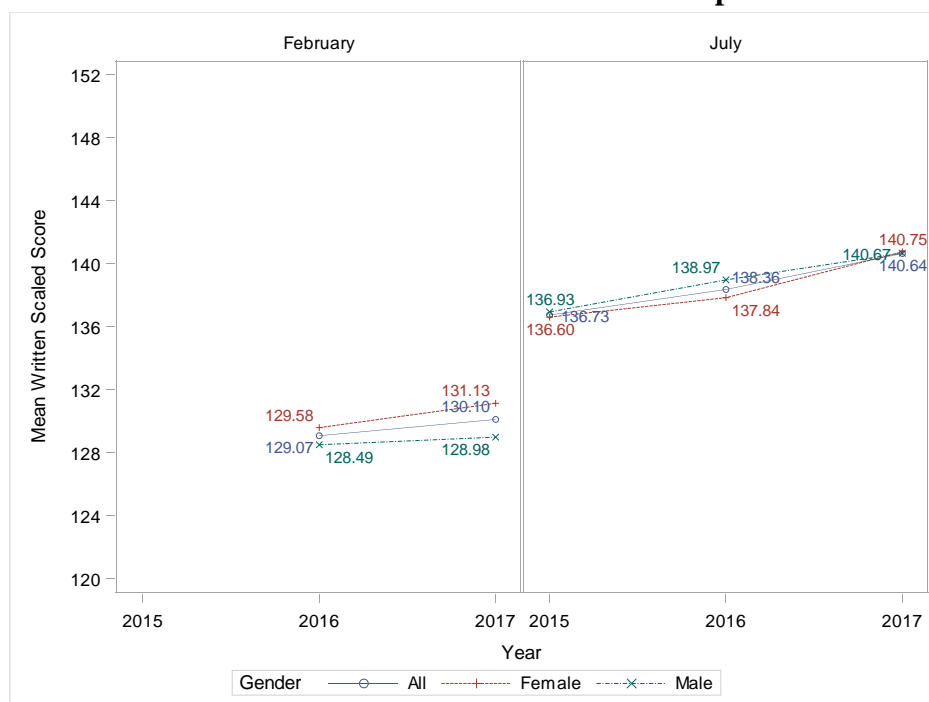
Table 4.2.3, Figure 4.2.5, and Figure 4.2.6 contain analysis of bar exam scores for the NYSBLE sample by gender. Average bar exam scores for males were higher, on average, compared to females across February and July exams. In February 2016, the difference between males and females 2.3 was points and in February 2017 the difference was 0.6 points. The difference in average bar exam scores between males and females was 5.7, 6.9, and 4.8 points across July 2015, July 2016, and July 2017, respectively, so there was a slight increase in the difference between groups at the first UBE administration in July 2016 that did not remain at the UBE administration in July 2017. Similar to MBE and written scores, average bar exam scores increased for males and females across Februarys and across Julys.[43]

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[43] It should be noted that average bar exam scores for males, females, and the total group in July are above the passing score of 266. This is also true for domestic-educated and domestic-educated first-time takers described below.

Table 4.2.3
Bar Exam Score Means and Standard Deviations
New York State Board of Law Examiners Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	257.15	260.51	270.84	273.99	279.57
(SEM 0.4 to 0.6)	(SD)	(27.90)	(28.02)	(33.12)	(34.10)	(35.32)
	N	2245	2357	5489	5349	5258
Male	Mean	259.49	261.11	276.51	280.92	284.32
(SEM 0.5 to 0.7)	(SD)	(29.51)	(29.69)	(33.48)	(35.26)	(35.38)
	N	1854	1723	4945	4773	4485
All*	Mean	258.20	260.62	273.52	277.24	281.67
(SEM 0.3 to 0.4)	(SD)	(28.66)	(28.72)	(33.36)	(34.83)	(35.46)
	N	4193	4162	10667	10297	9932

* All includes candidates omitting their gender.

Figure 4.2.5
Boxplots of Bar Exam Scores
New York State Board of Law Examiners Sample: Gender

Figure 4.2.6
Means of Bar Exam Scores
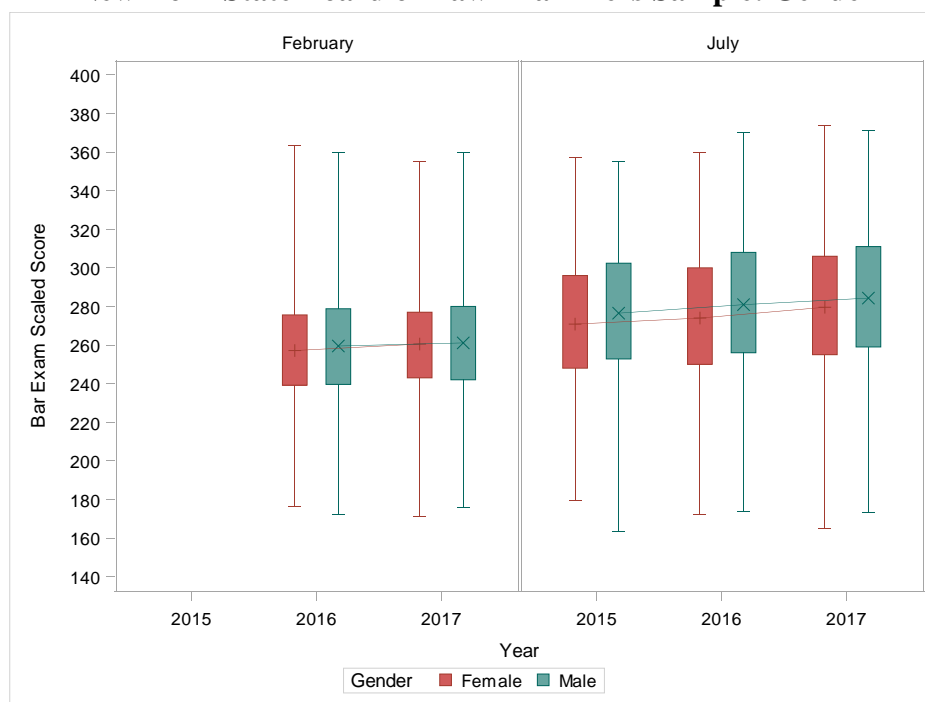**New York State Board of Law Examiners Sample: Gender**
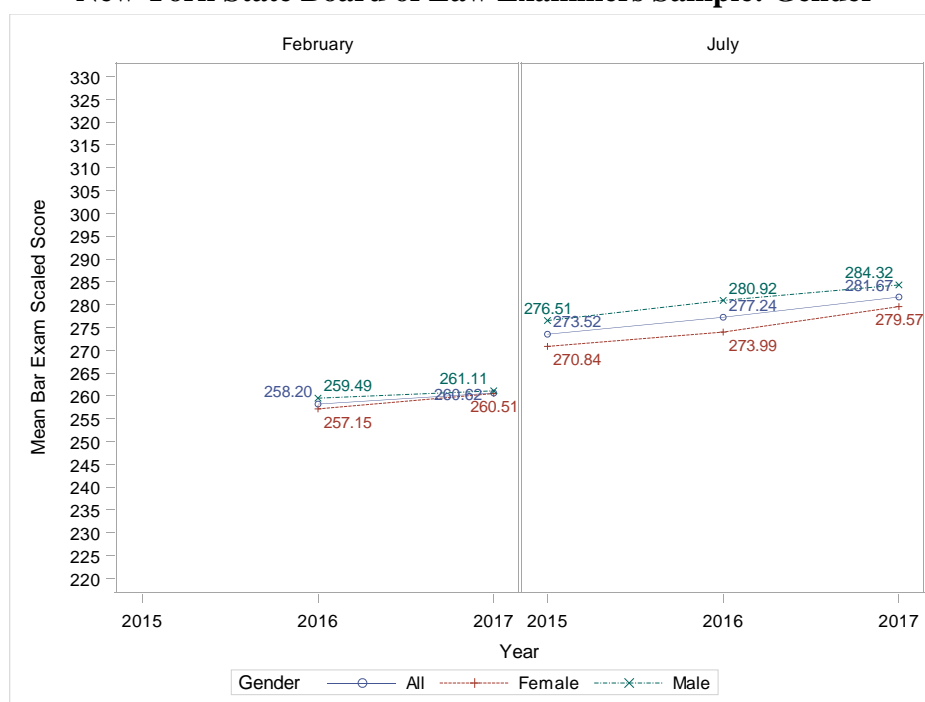
As might be expected given the average bar exam scores reported above, males had higher pass rates than females on each bar exam between July 2015 and July 2017 (see Table 4.2.4 and Figure 4.2.7). In addition, pass rates increased on each bar exam for males and females. In February, females saw larger increases in pass rates (38.7% to 43.7%) compared to males (42.8% to 44.6%). As illustrated in Figure 4.2.7, the differences between males and females narrowed in February. In July, pass rates initially increased slightly less for females (58.1% to 60.2%) than for males (64.0% to 68.0%) between 2015 and 2016, but then pass rates increased more for females (60.2% to 66.6%) than for males (68.0% to 70.9%) between July 2016 and July 2017. Between July 2015 and July 2017, the difference in percentage of male and female candidates passing decreased from 5.9 percentage points to 4.3 percentage points (after a difference between groups of 7.8 percentage points in July 2016). Similar to the MBE, written scores, and bar exam scores, pass rates diverged somewhat in July 2016 compared to July 2015 and July 2017.

Table 4.2.4
Pass Rates
New York State Board of Law Examiners Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female		38.7%	43.7%	58.1%	60.2%	66.6%
(SEM = 1)	N	2245	2357	5489	5349	5258
Male		42.8%	44.6%	64.0%	68.0%	70.9%
(SEM = 1)	N	1854	1723	4945	4773	4485
All*		40.5%	43.8%	60.9%	63.9%	68.5%
(SEM <= 1)	N	4193	4162	10667	10297	9932

* All includes candidates omitting their gender.

Figure 4.2.7
Pass Rates
**New York State Board of Law Examiners Sample: Gender**
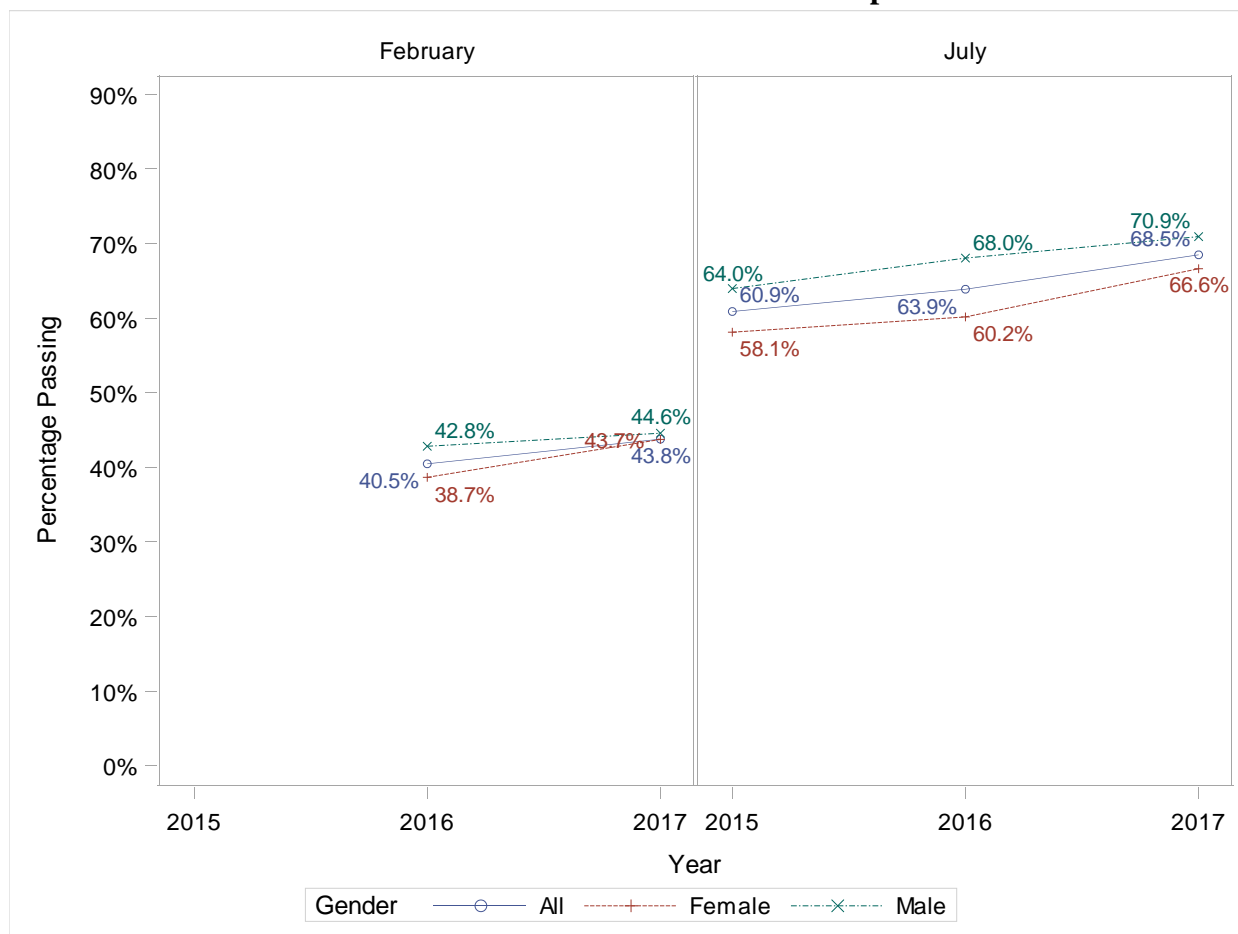
4.2.2 Domestic-Educated Candidates in the NYSBLE Sample by Gender

Similar to the entire NYSBLE sample, domestic-educated males in the NYSBLE sample scored higher, on average, compared to females at each bar exam (see Table 4.2.5, Figure 4.2.8, or Figure 4.2.9). Average MBE scores for males were 3.3 and 2.5 points higher than females in Februarys and 4.5, 4.8, and 3.8 points higher than females in Julys. Average scores for males and females decreased slightly in February, by roughly 0.2 points for males and roughly 0.6 points for females, and increased between July 2015 and July 2017 by roughly 3.2 points for males and roughly 3.9 points for females. In July, female average MBE scores increased slightly more than male MBE scores.

Also similar to the entire NYSBLE sample, in the domestic-educated group the number of candidates decreased but decreased more rapidly for males compared to females across July exams. The drop in number of males between July 2015 and July 2016 was 173, compared to 12 for females, and the drop in number of males between July 2016 and July 2017 was 341 compared to 173 for females. These shifts led to males outnumbering females in July 2015 but females outnumbering males in July 2016 and July 2017. The drop in number of candidates across July exams was associated with a disproportionate decrease in the number of male candidates.

Table 4.2.5
MBE Score Means and Standard Deviations
Domestic-Educated New York State Board of Law Examiners Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	131.53	132.13	139.46	140.93	143.35
(SEM 0.3 to 0.4)	(SD)	(13.93)	(13.86)	(15.37)	(16.18)	(16.90)
	N	1159	1279	3621	3609	3436
Male	Mean	134.87	134.63	143.94	145.72	147.13
(SEM 0.3 to 0.5)	(SD)	(14.85)	(14.94)	(16.08)	(16.49)	(16.86)
	N	1128	1042	3725	3552	3211
All*	Mean	133.18	133.24	141.71	143.27	145.19
(SEM 0.2 to 0.3)	(SD)	(14.53)	(14.44)	(15.89)	(16.52)	(16.99)
	N	2346	2370	7513	7292	6776

* All includes candidates omitting their gender.

Figure 4.2.8
Boxplots of MBE Scores
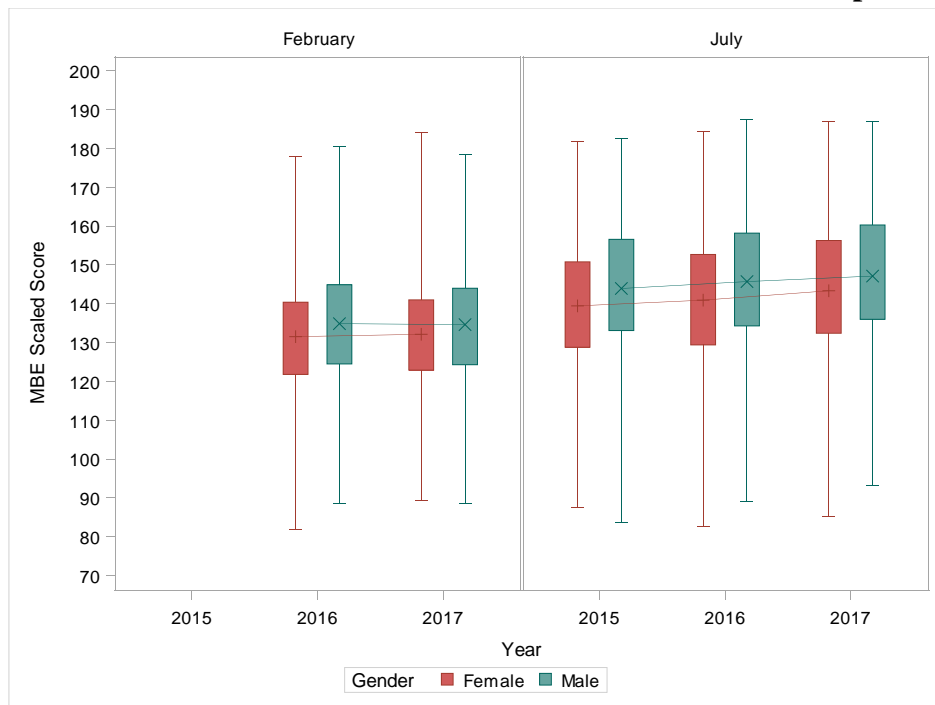**Domestic-Educated New York State Board of Law Examiners Sample: Gender**

Figure 4.2.9
Means of MBE Scores
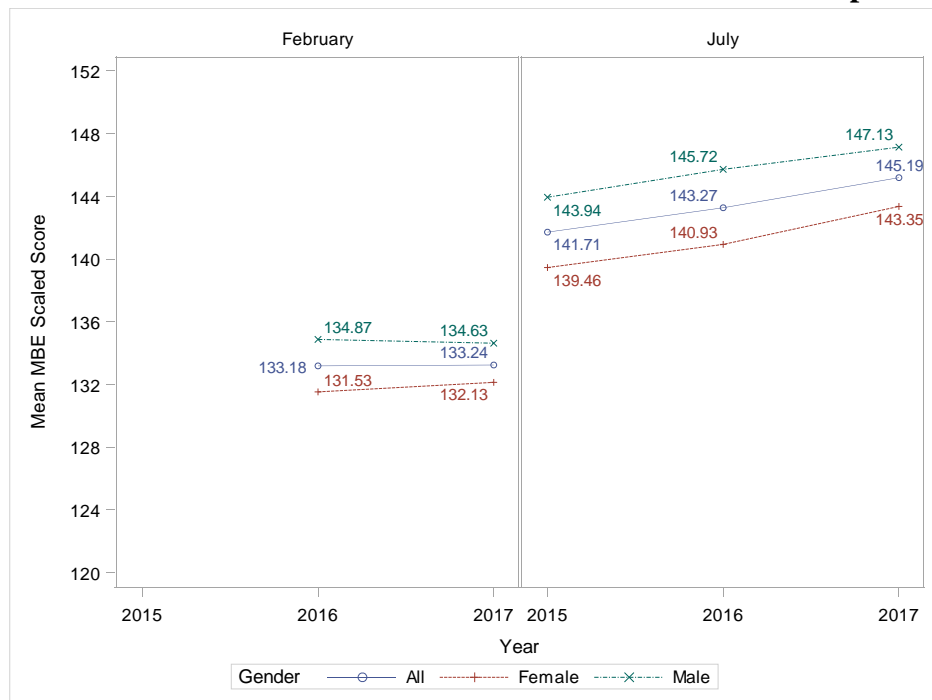**Domestic-Educated New York State Board of Law Examiners Sample: Gender**

Table 4.2.6, Figure 4.2.10, and Figure 4.2.11 contain summaries of written scores for domestic-educated candidates in the NYSBLE sample by gender. For February 2016 and 2017 bar exams, females scored higher, on average, on the written component compared to males. The difference between groups was roughly 0.8 points in February 2016 and 2.4 points in February 2017, so the difference increased. In July, females scored higher than males, on average, in 2015 (by 1.3 points) and 2017 (by 1.2 points) but males scored slightly higher in 2016 (by roughly 0.3 points). The average written scores increased across Februarys and across Julys for males and females. In February, average scores for males increased 0.9 points and average scores for females increased 1.9 points. Between July 2015 and July 2017, average scores for males increased 4.2 points and average scores for females increased 4.1 points.

Table 4.2.6
Written Score Means and Standard Deviations
Domestic-Educated New York State Board of Law Examiners Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	133.02	134.87	142.26	143.44	146.38
(SEM 0.3 to 0.4)	(SD)	(14.64)	(14.70)	(15.87)	(16.62)	(17.25)
	N	1159	1279	3621	3609	3436
Male	Mean	131.51	132.45	140.96	143.70	145.16
(SEM 0.3 to 0.5)	(SD)	(15.41)	(15.15)	(16.41)	(17.02)	(17.38)
	N	1128	1042	3725	3552	3211
All*	Mean	132.25	133.63	141.56	143.53	145.74
(SEM 0.2 to 0.3)	(SD)	(15.02)	(14.94)	(16.15)	(16.83)	(17.35)
	N	2346	2370	7513	7292	6776

* All includes candidates omitting their gender.

Figure 4.2.10
Boxplots of Written Scores
Domestic-Educated New York State Board of Law Examiners Sample: Gender
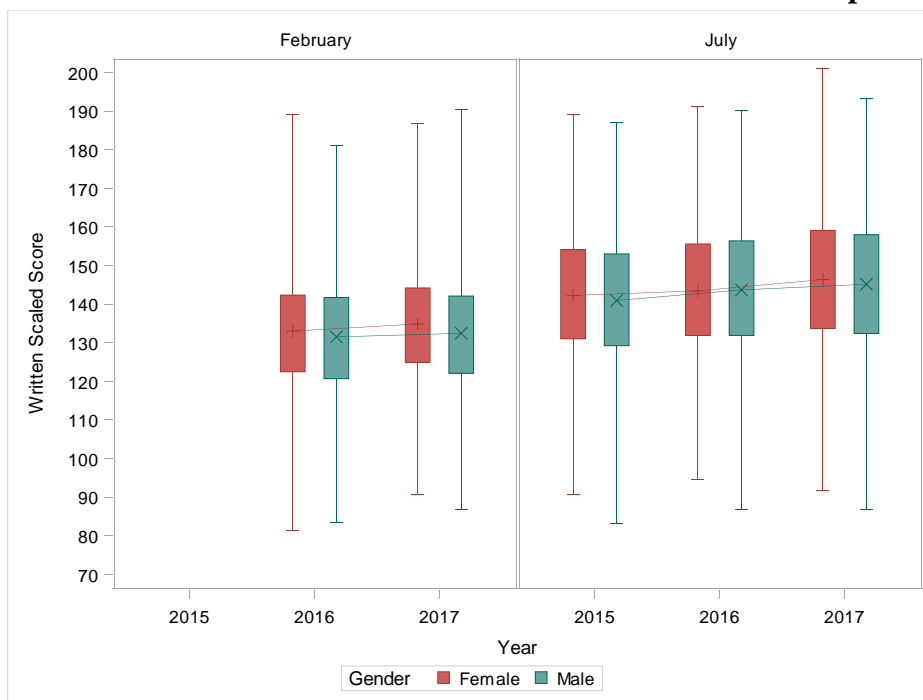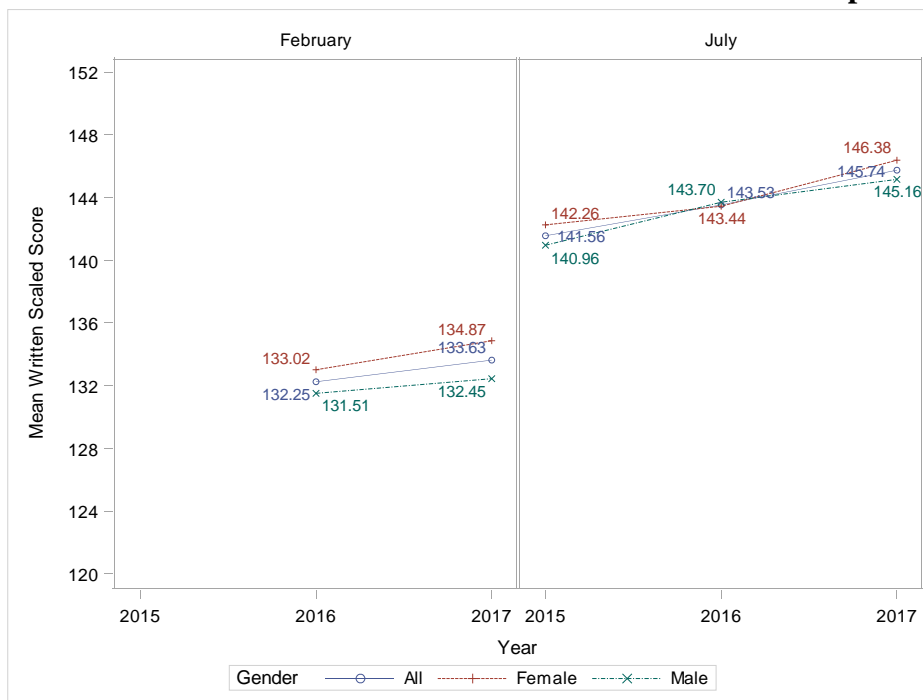

Figure 4.2.11
Means of Written Scores
Domestic-Educated New York State Board of Law Examiners Sample: Gender

Bar exam scores for the domestic-educated candidates in the NYSBLE sample by gender are summarized in Table 4.2.7, Figure 4.2.12, and Figure 4.2.13. Male bar exam scores were higher, on average, compared to females across February and July exams. In February 2016, the difference between males and females was 1.3 points and in February 2017 the difference was roughly 0.1 point. The difference in average bar exam scores between males and females was 2.7, 5.0, and 2.6 points across July 2015, July 2016, and July 2017, respectively, so there was an increase in the difference between groups at the first UBE administration that was not retained in July 2017. Average bar exam scores increased across February 2016 and February 2017 and across July 2015, July 2016, and July 2017 for males and females.

Table 4.2.7
Bar Exam Score Means and Standard Deviations
Domestic-Educated New York State Board of Law Examiners Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	264.56	267.06	281.72	284.43	289.78
(SEM 0.5 to 0.8)	(SD)	(25.62)	(25.54)	(28.74)	(30.47)	(32.11)
	N	1159	1279	3621	3609	3436
Male	Mean	265.86	267.13	284.44	289.47	292.34
(SEM 0.5 to 0.8)	(SD)	(27.27)	(26.94)	(29.87)	(31.26)	(32.17)
	N	1128	1042	3725	3552	3211
All*	Mean	265.19	266.93	283.04	286.85	290.98
(SEM 0.3 to 0.5)	(SD)	(26.50)	(26.20)	(29.33)	(31.01)	(32.18)
	N	2346	2370	7513	7292	6776

* All includes candidates omitting their gender.

Figure 4.2.12
Boxplots of Bar Exam Scores
Domestic-Educated New York State Board of Law Examiners Sample: Gender
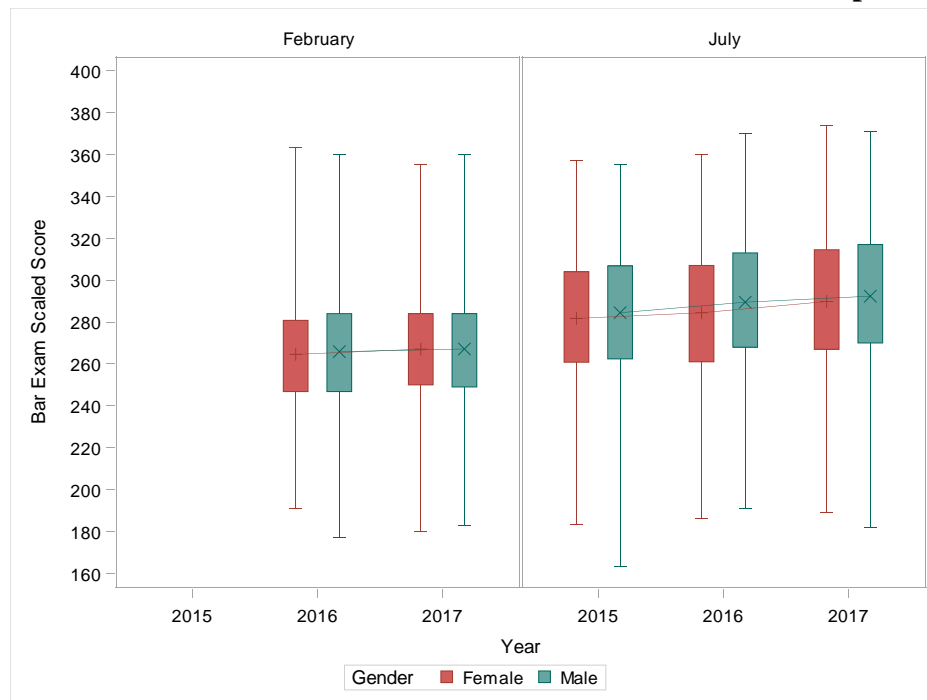

Figure 4.2.13
Means of Bar Exam Scores
Domestic-Educated New York State Board of Law Examiners Sample: Gender
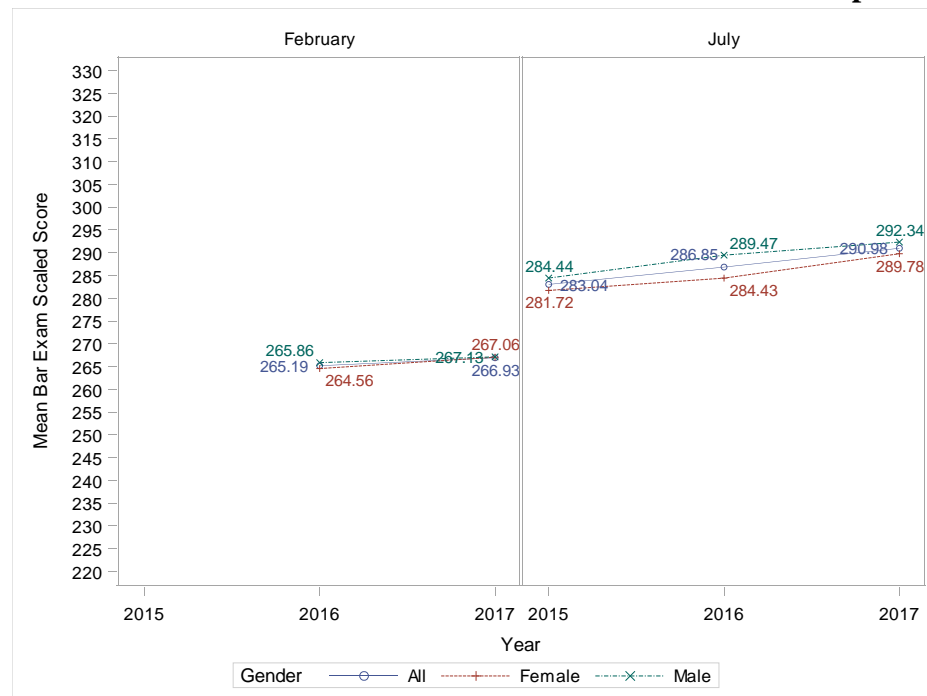
Table 4.2.8 and Figure 4.2.14 contain the pass rates for domestic-educated candidates in the NYSBLE sample. Pass rates for males were higher than females across each bar exam between July 2015 and July 2017. Pass rates increased across February and across July exams for both groups. In February, females had a larger increase in pass rate (4.9 percentage points) compared to males (1.6 percentage points). In July, pass rate increased more for males between 2015 and 2016 (4.1 percentage points) than for females (1.2 percentage points) and pass rate increased more for females between 2016 and 2017 (4.4 percentage points) than for males (1.5 percentage points). The result was that difference in pass rates in July 2017 between males and females was the same as July 2015. Similar to MBE scores, written scores, and bar exam scores, differences in pass rates across gender increased in July 2016 and decreased in July 2017. In other words, at the first UBE administration, differences between gender increased but at the July 2017 UBE administration, differences returned to levels observed pre-UBE in July 2015.

Table 4.2.8
Pass Rates
Domestic-Educated New York State Board of Law Examiners Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female		46.9%	51.8%	71.6%	72.8%	77.2%
(SEM = 1)	N	1159	1279	3621	3609	3436
Male		50.4%	52.0%	73.5%	77.6%	79.1%
(SEM 1 to 2)	N	1128	1042	3725	3552	3211
All*		48.7%	51.5%	72.5%	75.1%	78.0%
(SEM = 1)	N	2346	2370	7513	7292	6776

* All includes candidates omitting their gender.

Figure 4.2.14
Pass Rates
Domestic-Educated New York State Board of Law Examiners Sample: Gender
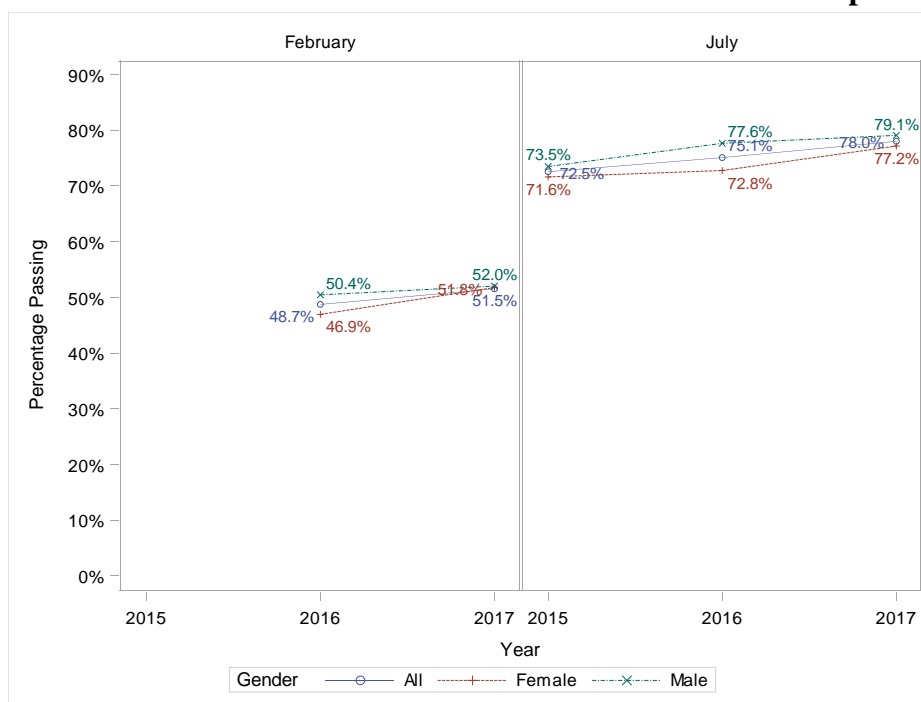
4.2.3 Domestic-Educated First-Time Takers in the NYSBLE Sample by Gender

Table 4.2.9 contains the means and standard deviations of MBE scores for domestic-educated first-time takers in the NYSBLE sample by gender and illustrates that average MBE scores for males were higher compared to females at each bar exam. Average MBE scores for males were 4.2 and 3.4 points higher than females in Februarys and 4.8, 5.2, and 3.8 points higher than females in Julys (these patterns are also displayed in Figures 4.2.15 and 4.2.16). Average MBE scores for males decreased slightly (by roughly 0.1 point) in February and scores for females increased (roughly 0.7 points). In July, average MBE scores for males and females increased, with the male average increasing from 146.52 to 148.68 to 150.29 (a 3.8 point increase) and the female average increasing from 141.70 to 143.53 to 146.53 (a 4.8 point increase).

Similar to the entire NYSBLE sample and the domestic-educated candidates in the NYSBLE, in the domestic-educated first-time taker group the number of candidates decreased but decreased more rapidly for males compared to females across July exams. The drop in number of males between July 2015 and July 2016 was 210, compared to 51 for females, and the drop in number of males between July 2016 and July 2017 was 305 compared to 196 for females. These shifts led to males outnumbering females in July 2015 but females outnumbering males in

July 2016 and July 2017. The drop in number of candidates across July exams was associated with a disproportionate decrease in the number of male candidates.

Table 4.2.9
MBE Score Means and Standard Deviations
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	137.92	138.59	141.70	143.53	146.53
(SEM 0.3 to 0.8)	(SD)	(15.85)	(15.54)	(14.62)	(15.32)	(15.73)
	N	389	461	3143	3092	2896
Male	Mean	142.09	141.96	146.52	148.68	150.29
(SEM 0.3 to 0.8)	(SD)	(16.02)	(15.83)	(14.92)	(15.15)	(15.43)
	N	396	420	3253	3043	2738
All*	Mean	140.10	140.18	144.15	146.11	148.37
(SEM 0.2 to 0.6)	(SD)	(16.09)	(15.74)	(14.95)	(15.42)	(15.70)
	N	803	905	6536	6232	5742

* All includes candidates omitting their gender.

Figure 4.2.15
Boxplots of MBE Scores
Domestic-Educated First-Time Takers
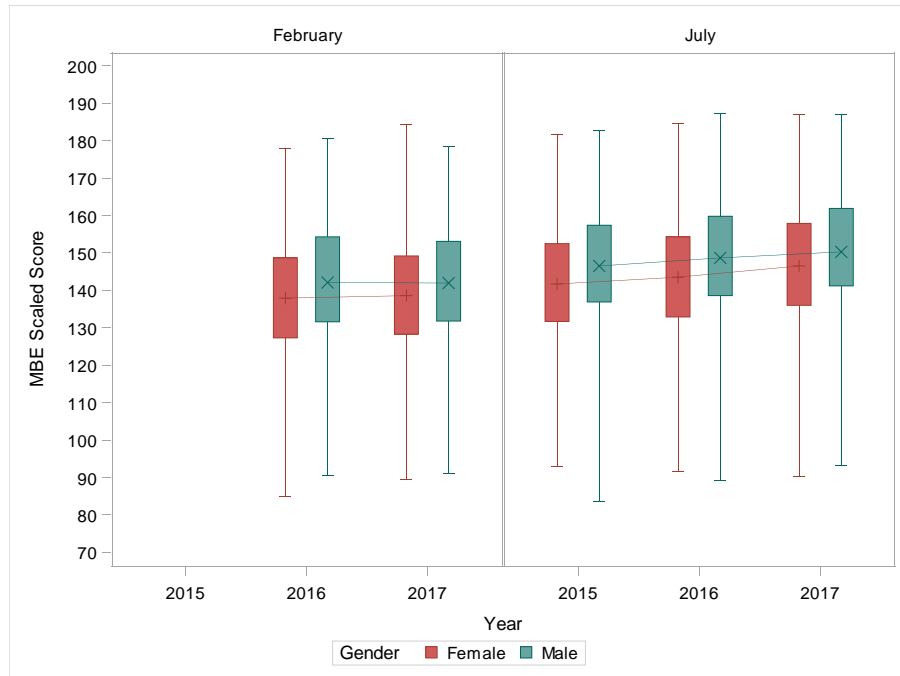**New York State Board of Law Examiners Sample: Gender**

Figure 4.2.16
Means of MBE Scores
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Gender
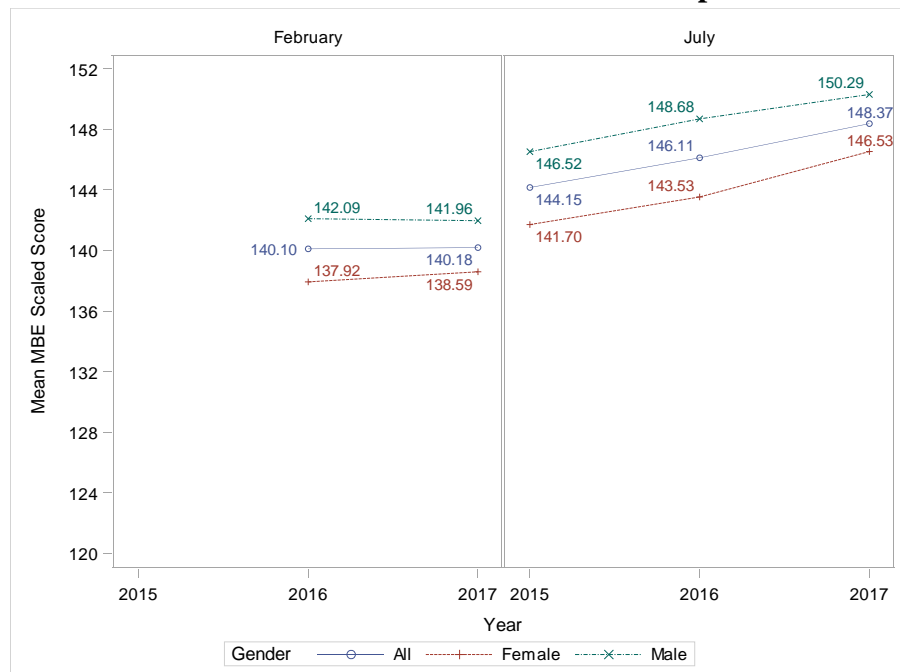
Table 4.2.10, Figure 4.2.17 and Figure 4.2.18 contain analysis of the written scores for domestic-educated first-time takers in the NYSBLE sample. Average written scores for females were higher than males in February 2016 and February 2017 by 0.8 and 1.1 points, respectively. In July, females had higher average written scores in 2015 and 2017 (by 1.1 points) but lower average written scores in 2016 (by 0.75 points). Similar to the domestic-educated candidates in the NYSBLE sample, differences between male and female average written scores in July 2016 increased before returning in July 2017 to levels observed prior to UBE adoption in July 2015. Average written scores increased for males and females across Februarys and across Julys. Female average scores in February increased from 138.06 to 141.05 and from 144.54 to 146.03 to 149.55 in July. Male average scores in February increased from 137.24 to 139.96 and from 143.43 to 146.78 to 148.42 in July. Across July exams, female and male average written scores increased roughly 5 points.

Table 4.2.10
Written Score Means and Standard Deviations
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	138.06	141.05	144.54	146.03	149.55
(SEM 0.3 to 0.9)	(SD)	(17.18)	(16.21)	(14.97)	(15.79)	(16.20)
	N	389	461	3143	3092	2896
Male	Mean	137.24	139.96	143.43	146.78	148.42
(SEM 0.3 to 0.9)	(SD)	(17.41)	(15.73)	(15.33)	(15.70)	(16.05)
	N	396	420	3253	3043	2738
All*	Mean	137.64	140.28	143.96	146.43	148.96
(SEM 0.2 to 0.6)	(SD)	(17.25)	(15.95)	(15.13)	(15.72)	(16.16)
	N	803	905	6536	6232	5742

* All includes candidates omitting their gender.

Figure 4.2.17
Boxplots of Written Scores
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Gender

Figure 4.2.18
Means of Written Scores
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Gender
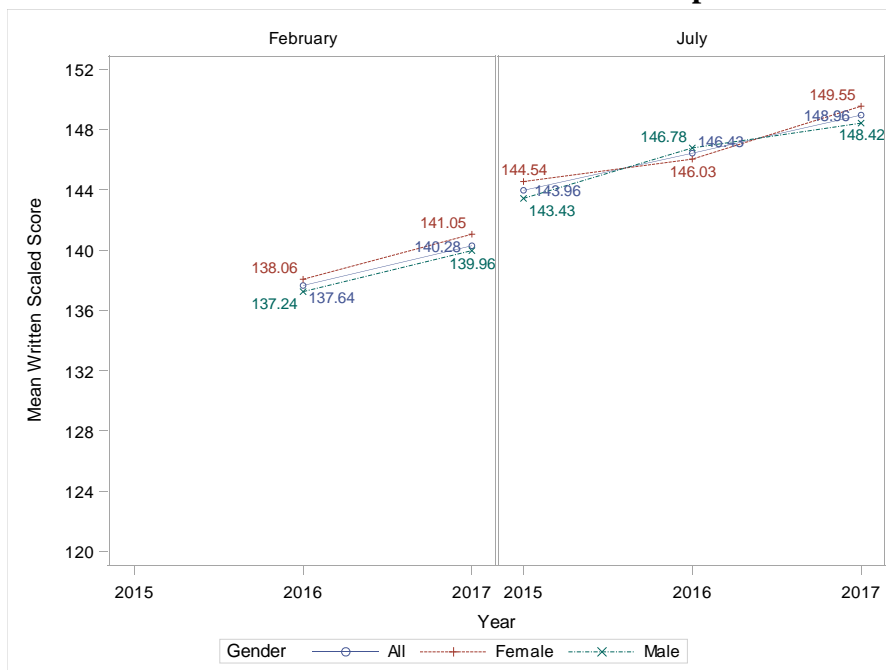
Similar to the entire NYSBLE sample and domestic-educated candidates in the NYSBLE sample, males in the domestic-educated first-time takers in the NYSBLE sample had average bar exam scores that were higher than females (Table 4.2.11). The difference in scores was 2.9 in February 2016, 2.3 in February 2017, 3.2 in July 2015, 5.9 in July 2016, and 2.6 in July 2017; the differences decreased across February exams and increased between July 2015 and July 2016 before decreasing in July 2017 (see Figures 4.2.19 and 4.2.20). In other words, there was an increased separation in average bar exam scores between males and females at the first UBE administration that did not persist in July 2017. Average bar exam scores increased across Februarys and Julys for males and females. Averages for males increased 3.3 points and averages for females increased 3.9 points in February. Averages for males increased 9.3 points and averages for females increased 9.9 points between July 2015 and July 2017.

Table 4.2.11
Bar Exam Score Means and Standard Deviations
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	275.79	279.72	286.24	289.61	296.13
(SEM 0.5 to 1.5)	(SD)	(30.05)	(29.11)	(26.91)	(28.68)	(29.75)
	N	389	461	3143	3092	2896
Male	Mean	278.65	281.98	289.45	295.51	298.76
(SEM 0.5 to 1.5)	(SD)	(30.77)	(28.74)	(27.42)	(28.42)	(29.22)
	N	396	420	3253	3043	2738
All*	Mean	277.31	280.53	287.86	292.59	297.37
(SEM 0.3 to 1.1)	(SD)	(30.45)	(28.87)	(27.17)	(28.65)	(29.54)
	N	803	905	6536	6232	5742

* All includes candidates omitting their gender.

Figure 4.2.19
Boxplots of Bar Exam Scores
Domestic-Educated First-Time Takers
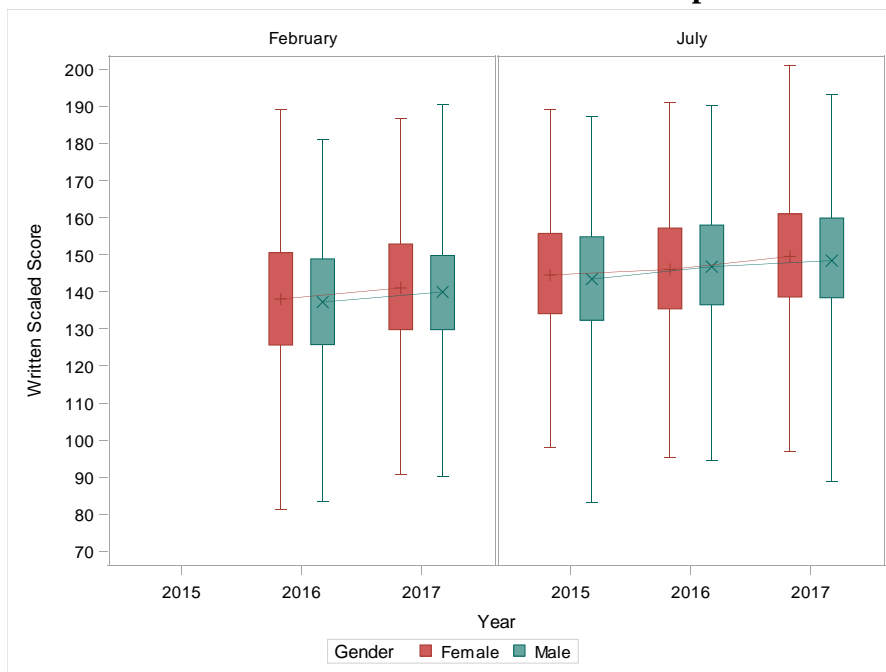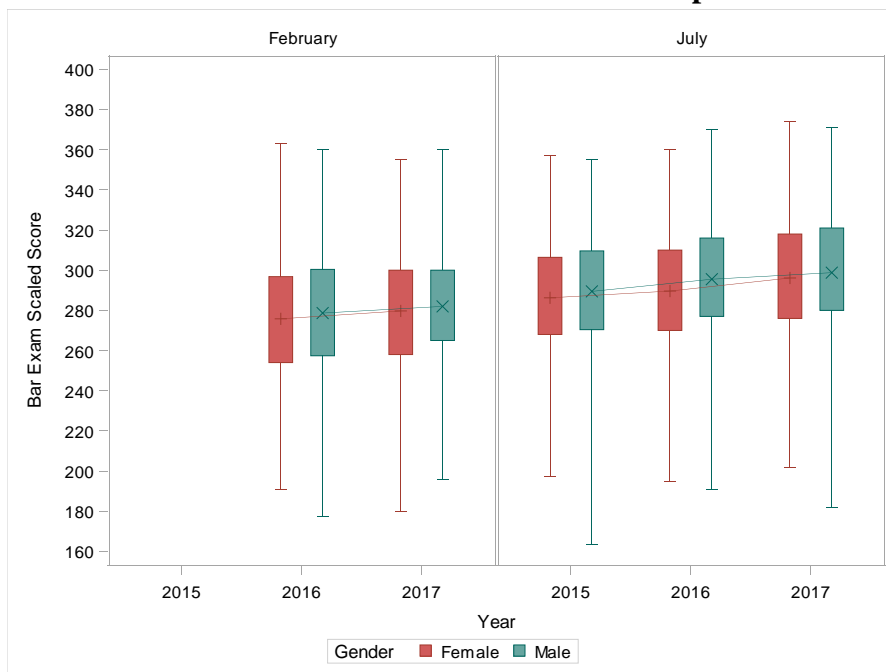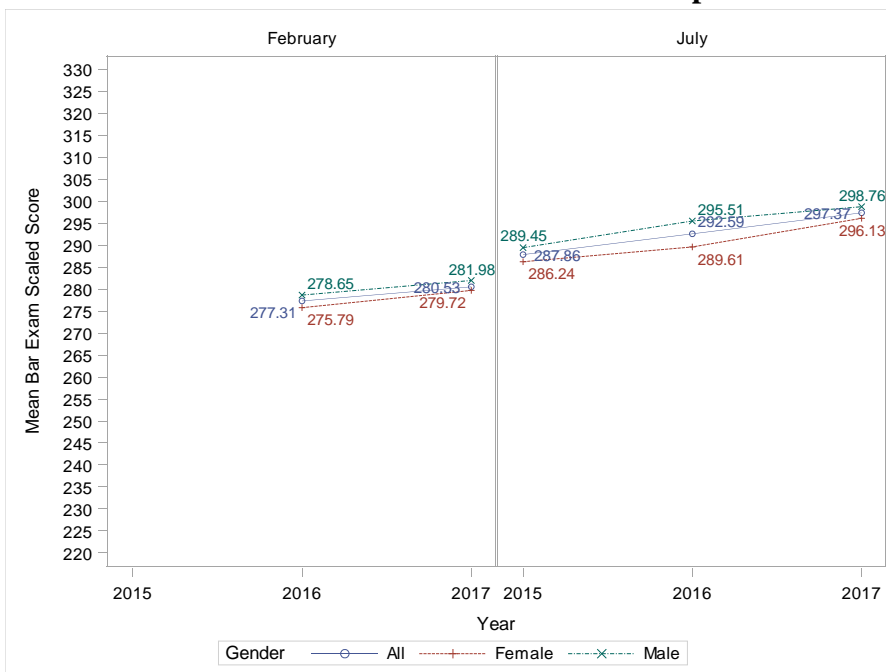**New York State Board of Law Examiners Sample: Gender**

Figure 4.2.20
Means of Bar Exam Scores
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Gender

Pass rates for domestic-educated first-time takers by gender are presented in Table 4.2.12 and Figure 4.2.21. Males had higher pass rates than females across each bar exam between July 2015 and July 2017. In addition, pass rate increased across February and across July exams for both groups. In February, males had a larger increase in pass rate (5.6 percentage points) compared to females (3.1 percentage points). In July, pass rate increased more for males between 2015 and 2016 (5.0 percentage points) than for females (1.8 percentage points) and pass rate increased more for females between 2016 and 2017 (5.1 percentage points) than for males (1.7 percentage points). The result was that the difference in pass rate in July 2017 between male and female domestic-educated first-time takers was slightly smaller (2.2 percentage points) than the difference in July 2015 (2.4 percentage points), with the pass rate difference larger in July 2016 (4.8 percentage points) at the first UBE administration.

Table 4.2.12
Pass Rates
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female		64.8%	67.9%	78.1%	79.9%	85.0%
(SEM 1 to 2)	N	389	461	3143	3092	2896
Male		68.9%	74.5%	80.5%	85.5%	87.2%
(SEM 1 to 2)	N	396	420	3253	3043	2738
All*		67.1%	70.5%	79.3%	82.8%	86.0%
(SEM <= 2)	N	803	905	6536	6232	5742

* All includes candidates omitting their gender.

The above analysis of the NYSBLE sample by gender (the entire group, domestic-educated, and domestic-educated first-time takers) showed that performance improved on the MBE, written component, bar exam scores, and pass rates across July exams, and results were less stable for February exams. In addition, average performance across July exams on (a) the MBE tended to be higher for males than females, (b) the written component tended to be higher for females than males in 2015 and 2017 (except for the entire group, where in 2017 males tended to be higher than females), (c) the written component tended to be higher for males than females in 2016, (d) the bar exam scores tended to be higher for males than females. Average bar exam scores and pass rates in July tended to be higher for males than females before and after UBE adoption, with differences between males and females increasing slightly in July 2016, after UBE adoption, before the differences decreased in July 2017. It was not entirely clear why

this happened but looking back at the performance on background characteristics in section 3,[44] the pattern of average July scores for males and females on UGPA, LSAT score, and LGPA look more consistent with the pattern of female July scores on the bar exam, which may suggest that males are performing somewhat better than might be expected in July 2016 given their patterns of performance on background characteristics in July 2016. However, we don't have additional data to adequately support of refute this hypothesis.[45] It was interesting that differences between males and females in July 2015 and July 2017 looked rather similar, even though performance for both groups improved, making it unlikely that the UBE explained the increased difference observed in July 2016. February results were somewhat less stable, but tended to show increasing patterns of performance before and after UBE adoption and males scoring somewhat higher than females, on average on the bar exam. After studying the NYSBLE sample by race/ethnicity next, we will return to gender for the school-based sample in section 4.3.1.

Figure 4.2.21
Pass Rates
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Gender

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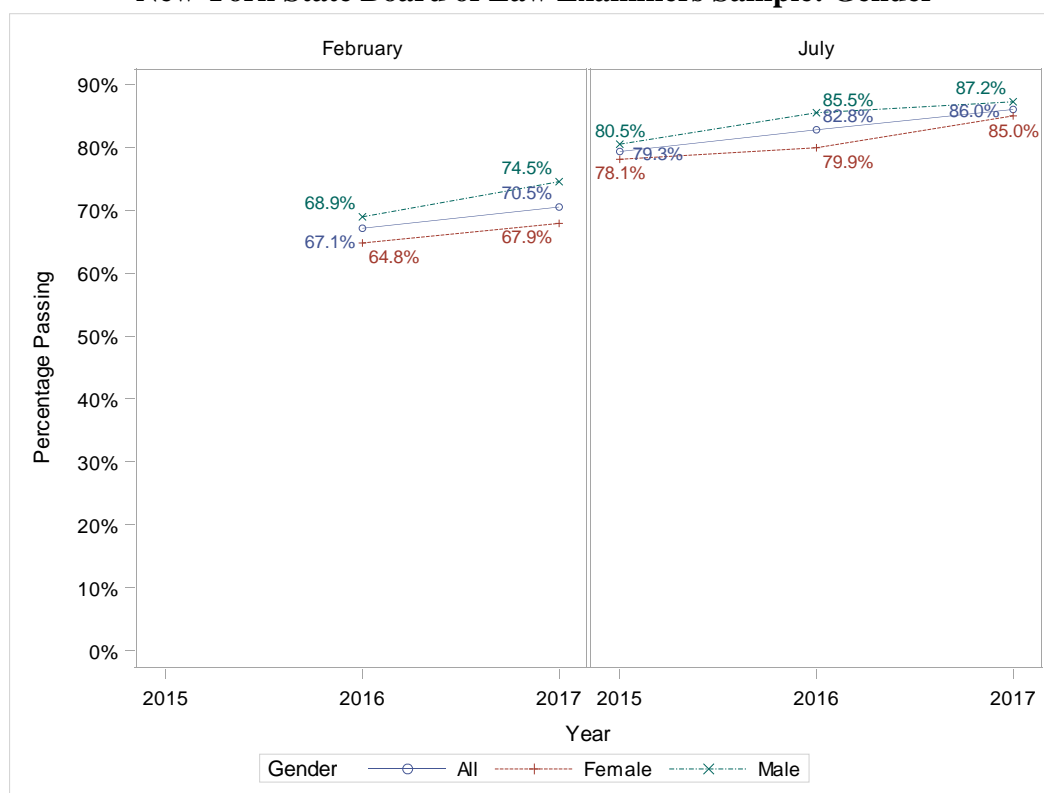
[44] Assuming that it is reasonable to generalize July results from the school-based sample to all candidates taking the New York bar exam, which may not be strictly realistic, however, as we will see in section 4.3, the school-based sample showed similar increases in the differences in average bar exam scores and pass rates between females and males in the school-based sample.

[45] Analysis in Appendix O also showed that male bar exam performance tended to be better than expected.

4.2.4 NYSBLE Sample by Race/Ethnicity

Table 4.2.13 provides means and standard deviations of MBE scores for the New York State Board of Law Examiners (NYSBLE) sample by race/ethnicity.[46] Average MBE scores differed by racial/ethnic group, particularly for the Caucasian/White group compared to other groups (see Figures 4.2.22 and 4.2.23). The Caucasian/White group had the highest average scores, followed by the Hispanic/Latino group (in all but July 2017) or Asian/Pacific Islander group, and then Black/African American group. Scores increased across February bar exams and across July bar exams for each group.

In February, average MBE scores increased by 2.1 points for the Hispanic/Latino group, 1.9 points for the Asian/Pacific Islander group, 1.7 points for the Black/African American group, and 0.1 point for the Caucasian/White group. Between July 2015 and July 2017, average MBE scores increased by roughly 7.3 points for the Asian/Pacific Islander group, 4.8 points for the Hispanic/Latino group, 4.0 points for the Black/African American group, and 3.4 points for the Caucasian/White group. So, while the Caucasian/White group scored higher, on average, the remaining groups had larger increases in average MBE scores. The Hispanic/Latino average scores leveled off between July 2016 and July 2017, increasing less than other groups, which led the Hispanic/Latino mean to drop below the Asian/Pacific Islander mean in July 2017.

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[46] Results for additional racial/ethnic groups are provided in Appendix K.

Table 4.2.13
MBE Score Means and Standard Deviations
New York State Board of Law Examiners Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	133.58	133.67	142.81	144.09	146.19
(SEM 0.2 to 0.4)	(SD)	(15.57)	(15.95)	(16.31)	(17.33)	(17.46)
	N	1601	1687	5404	5177	4722
Asian/Pacific Islander	Mean	126.17	128.11	129.89	133.58	137.24
(SEM 0.3 to 0.5)	(SD)	(15.70)	(15.30)	(17.75)	(18.42)	(19.03)
	N	1204	1064	2652	2547	2574
Black/African American	Mean	124.84	126.55	128.07	129.99	132.04
(SEM 0.5 to 0.6)	(SD)	(13.87)	(13.87)	(15.40)	(15.83)	(16.63)
	N	516	579	877	886	928
Hispanic/Latino	Mean	127.43	129.53	130.92	134.40	135.68
(SEM 0.7 to 0.9)	(SD)	(15.23)	(14.93)	(16.91)	(16.83)	(16.67)
	N	307	332	600	647	629
All*	Mean	129.11	130.47	136.76	138.83	140.98
(SEM = 0.2)	(SD)	(15.81)	(15.69)	(17.92)	(18.34)	(18.63)
	N	4193	4162	10667	10297	9932

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.2.22
Boxplots of MBE Scores
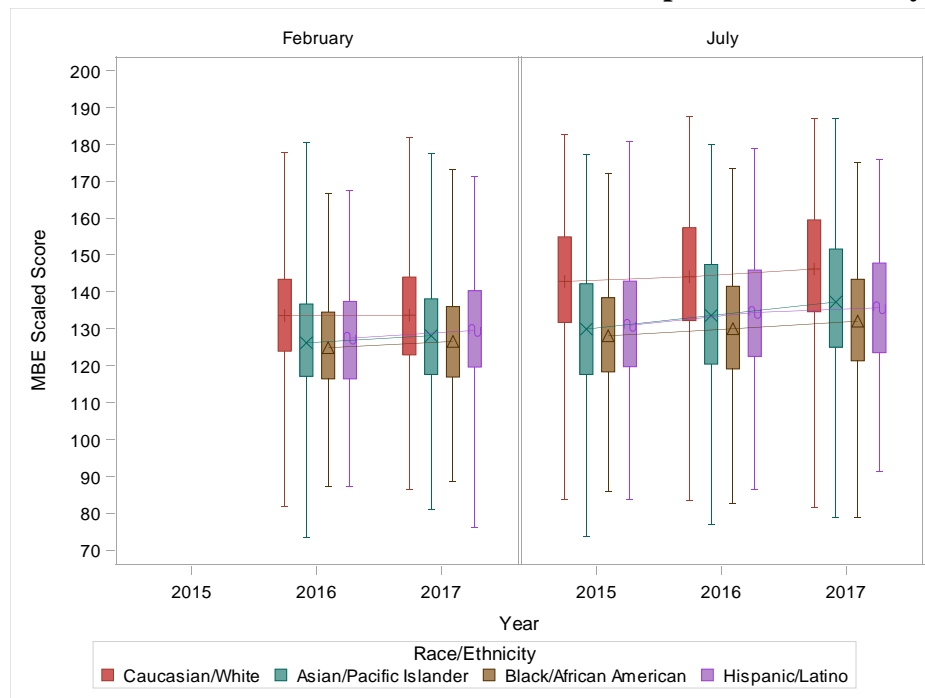**New York State Board of Law Examiners Sample: Race/Ethnicity**

Figure 4.2.23
Means of MBE Scores
New York State Board of Law Examiners Sample: Race/Ethnicity
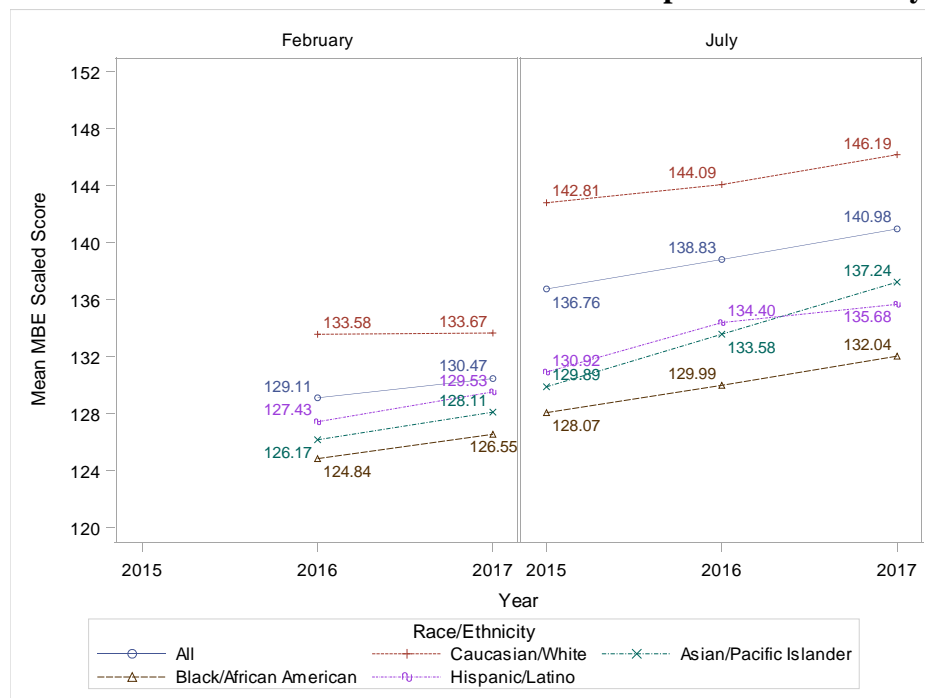
Average written scores also differed by race/ethnicity (see Table 4.2.14, Figure 4.2.24, and Figure 4.2.25). The Caucasian/White group had the highest means, followed by the Hispanic/Latino or Asian/Pacific Islander (in July 2017) groups, and the Black/African American group.

Average written scores increased for each group across February exams and increased for each group across July exams with the exception of the African/American group in July 2016, where the average written score decreased from 129.36 to 128.38 (almost 1 point) between July 2015 and July 2016 before increasing in July 2017 to 131.43. Ultimately, between July 2015 and July 2017, average scores increased 3.9 points for the Caucasian/White group, almost 3 points for the Asian/Pacific Islander and Hispanic/Latino groups, and a bit over 2 points for the Black/African American group. In other words, the July average written scores for candidates in groups other than the Caucasian/White group did not increase as rapidly as the Caucasian/White group between 2015 and 2017.

Table 4.2.14
Written Score Means and Standard Deviations
New York State Board of Law Examiners Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	133.05	134.03	142.70	144.44	146.61
(SEM 0.2 to 0.4)	(SD)	(15.89)	(16.22)	(16.37)	(17.43)	(17.85)
	N	1601	1687	5404	5177	4722
Asian/Pacific Islander	Mean	126.51	127.25	129.37	131.57	135.58
(SEM 0.3 to 0.5)	(SD)	(15.49)	(15.64)	(17.58)	(18.32)	(18.65)
	N	1204	1064	2652	2547	2574
Black/African American	Mean	124.99	125.51	129.36	128.38	131.43
(SEM 0.5 to 0.6)	(SD)	(13.91)	(13.57)	(16.18)	(15.95)	(16.30)
	N	516	579	877	886	928
Hispanic/Latino	Mean	127.21	128.46	132.04	133.36	135.00
(SEM 0.7 to 0.9)	(SD)	(15.98)	(15.05)	(17.52)	(17.20)	(16.98)
	N	307	332	600	647	629
All*	Mean	129.07	130.10	136.73	138.36	140.64
(SEM = 0.2)	(SD)	(15.80)	(15.94)	(17.93)	(18.63)	(18.91)
	N	4193	4162	10667	10297	9932

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.2.24
Boxplots of Written Scores
**New York State Board of Law Examiners Sample: Race/Ethnicity**

Figure 4.2.25
Means of Written Scores
New York State Board of Law Examiners Sample: Race/Ethnicity
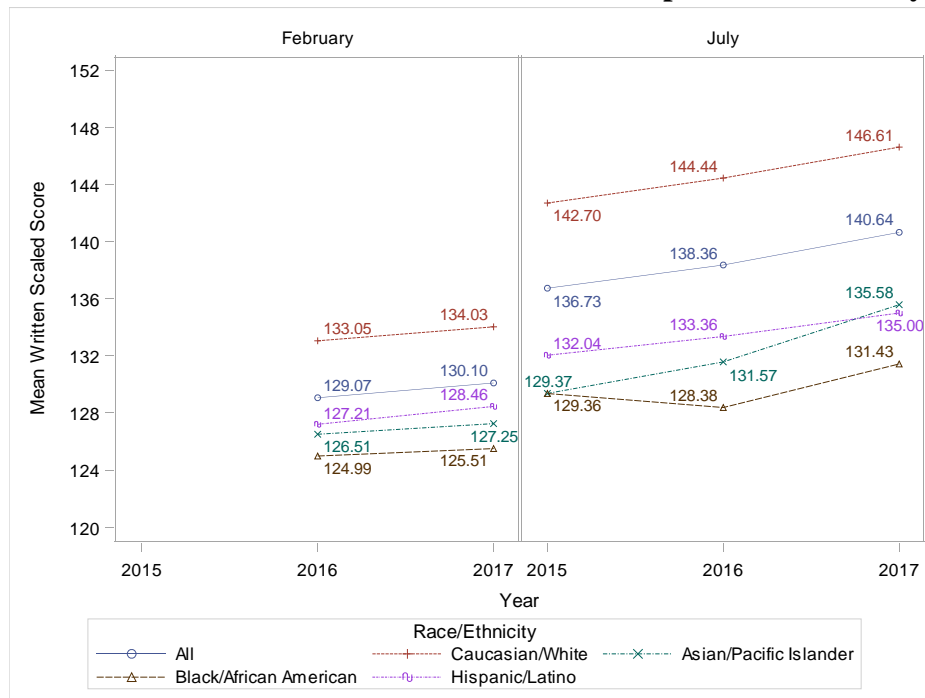
Similar to MBE and written components, average bar exam scores differed across groups (see Table 4.2.15, Figure 4.2.26, and Figure 4.2.27). Average scores were highest for the Caucasian/White group, followed by Hispanic/Latino group or the Asian/Pacific Islander group (in July 2017), and then the Black/African American group. Scores increased for all groups across Februarys and across Julys. Between July 2015 and July 2017, bar exam scores increased 13.4 points for the Asian/Pacific Islander group, 7.5 points for the Caucasian/White and the Hispanic/Latino groups, and 5.9 points for the Black/African American group.

Table 4.2.15
Bar Exam Score Means and Standard Deviations
New York State Board of Law Examiners Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	266.59	267.75	285.39	288.58	292.84
(SEM 0.4 to 0.7)	(SD)	(28.43)	(29.26)	(29.85)	(32.46)	(33.19)
	N	1601	1687	5404	5177	4722
Asian/Pacific Islander	Mean	252.57	255.42	259.49	265.21	272.88
(SEM 0.6 to 0.9)	(SD)	(28.11)	(27.74)	(33.01)	(34.48)	(35.40)
	N	1204	1064	2652	2547	2574
Black/African American	Mean	250.01	252.12	257.59	258.42	263.53
(SEM 1.0 to 1.1)	(SD)	(24.71)	(24.17)	(29.22)	(29.43)	(30.79)
	N	516	579	877	886	928
Hispanic/Latino	Mean	255.10	258.06	263.24	267.79	270.73
(SEM 1.3 to 1.6)	(SD)	(28.07)	(27.21)	(32.11)	(31.81)	(31.70)
	N	307	332	600	647	629
All*	Mean	258.20	260.62	273.52	277.24	281.67
(SEM 0.3 to 0.4)	(SD)	(28.66)	(28.72)	(33.36)	(34.83)	(35.46)
	N	4193	4162	10667	10297	9932

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.2.26
Boxplots of Bar Exam Scores
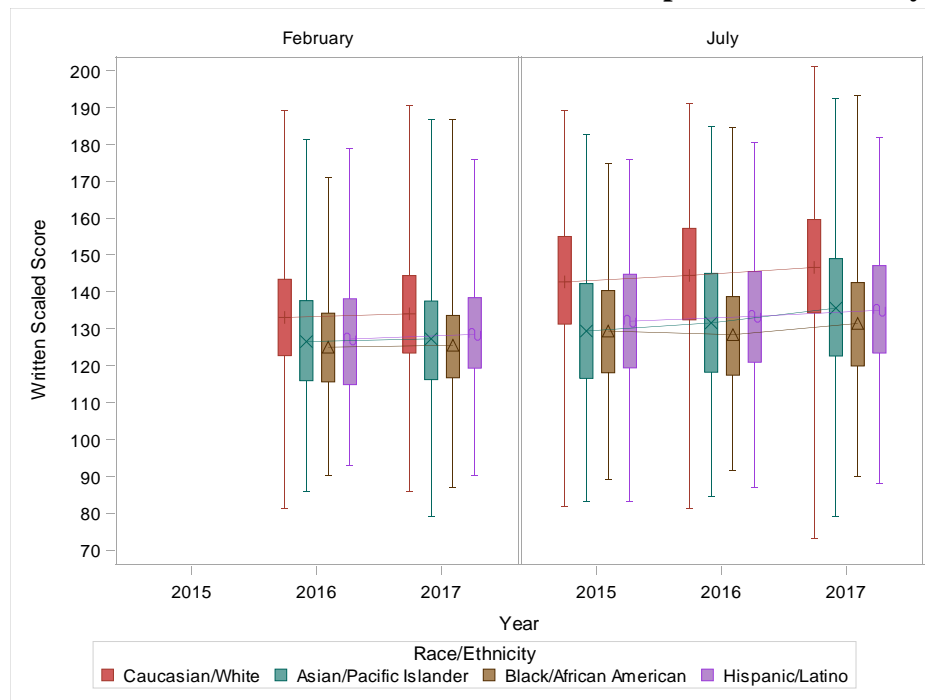**New York State Board of Law Examiners Sample: Race/Ethnicity**

Figure 4.2.27
Means of Bar Exam Scores
New York State Board of Law Examiners Sample: Race/Ethnicity
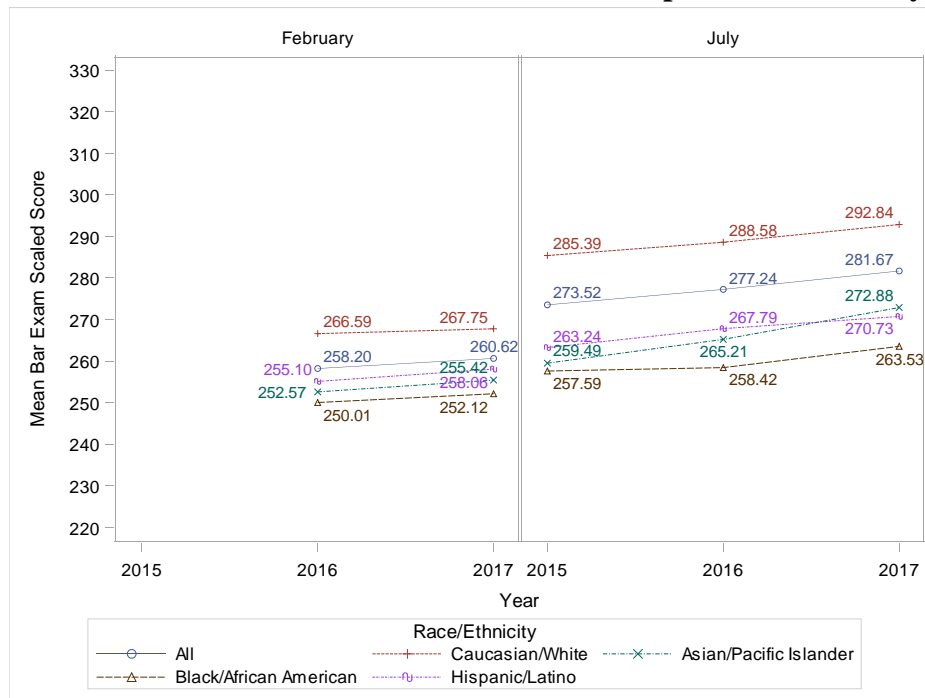
As might be expected given that passing status is derived from bar exam scores, the patterns of pass rates for the entire NYSBLE sample were generally similar to the patterns in average bar exam scores, where racial/ethnic groups differed and pass rates tended to increase across Februarys and across Julys (see Table 4.2.16 and Figure 4.2.28). The one exception was that the Black/African American group had pass rates that declined somewhat between July 2015 and July 2016 from 41.0% to 39.6%. This seems counterintuitive given that the average bar exam score increased, but it happened because of (a) where the passing score of 266 falls in the distribution of bar exam scores for the Black/African American group and, more importantly, (b) the shape of the distribution of scores for the Black/African American group. Figure 4.2.29 displays the July distributions of bar exam scores for the Black/African American group. The solid blue curve represents the July 2016 bar exam scores and we can see that the distribution had a higher peak and is squeezed together a bit more at scores near and just below a score of 266 than in 2015 or 2017; in other words, the distribution is shaped a bit differently in July 2016 and this led to the patterns of mean scores and pass rates not corresponding.[47] It is also helpful to consider that average scores on the written component declined slightly in 2016 for the Black/African American group, which contributed to the distribution of bar exam scores in July 2016. Interestingly, pass rates for the Black/African American group recovered in July 2017 to 48.6%, an increase of 7.6 percentage points compared to July 2015. The Hispanic/Latino group saw the largest increase in pass rates between July 2015 and July 2017, with an increase in 15.8 percentage points, followed by Asian/Pacific Islander (8.9 percentage points), Black/African American, and Caucasian/White groups (4.4 percentage points). Between July 2015 and July 2017, pass rates increased for all groups

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[47] If the distributions were perfect bell-shaped curves, the patterns of mean scores and pass rates would correspond.

Table 4.2.16
Pass Rates
New York State Board of Law Examiners Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White		52.5%	53.4%	75.2%	76.3%	79.6%
(SEM = 1)	N	1601	1687	5404	5177	4722
Asian/Pacific Islander		33.9%	37.5%	44.6%	51.0%	60.4%
(SEM = 1)	N	1204	1064	2652	2547	2574
Black/African American		27.3%	30.4%	41.0%	39.6%	48.6%
(SEM =2)	N	516	579	877	886	928
Hispanic/Latino		36.5%	41.0%	48.2%	53.8%	57.1%
(SEM 2 to 3)	N	307	332	600	647	629
All*		40.5%	43.8%	60.9%	63.9%	68.5%
(SEM <= 1)	N	4193	4162	10667	10297	9932

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.2.28
Pass Rates
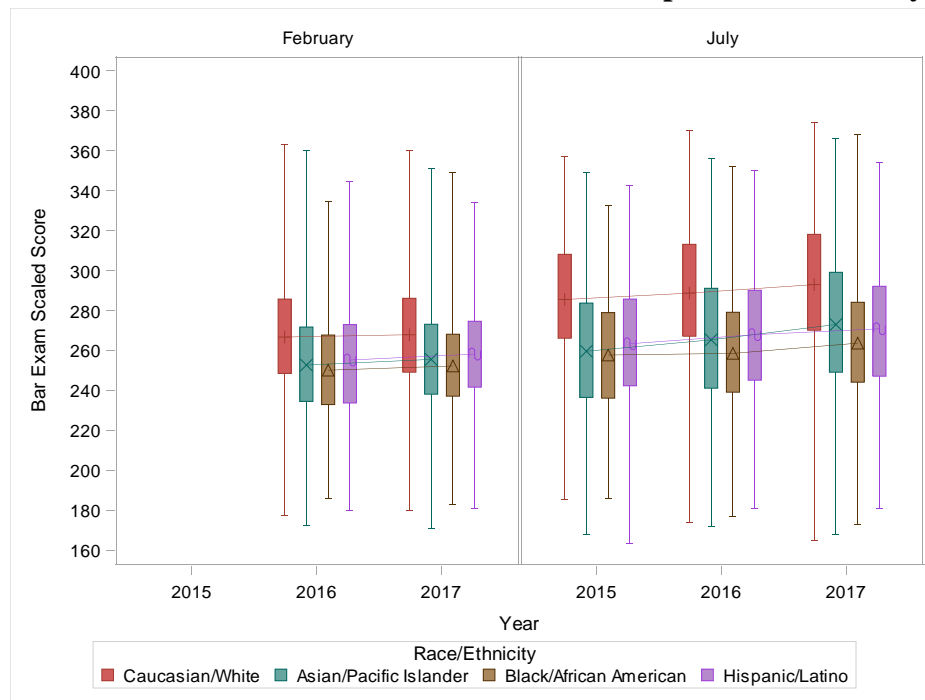**New York State Board of Law Examiners Sample: Race/Ethnicity**
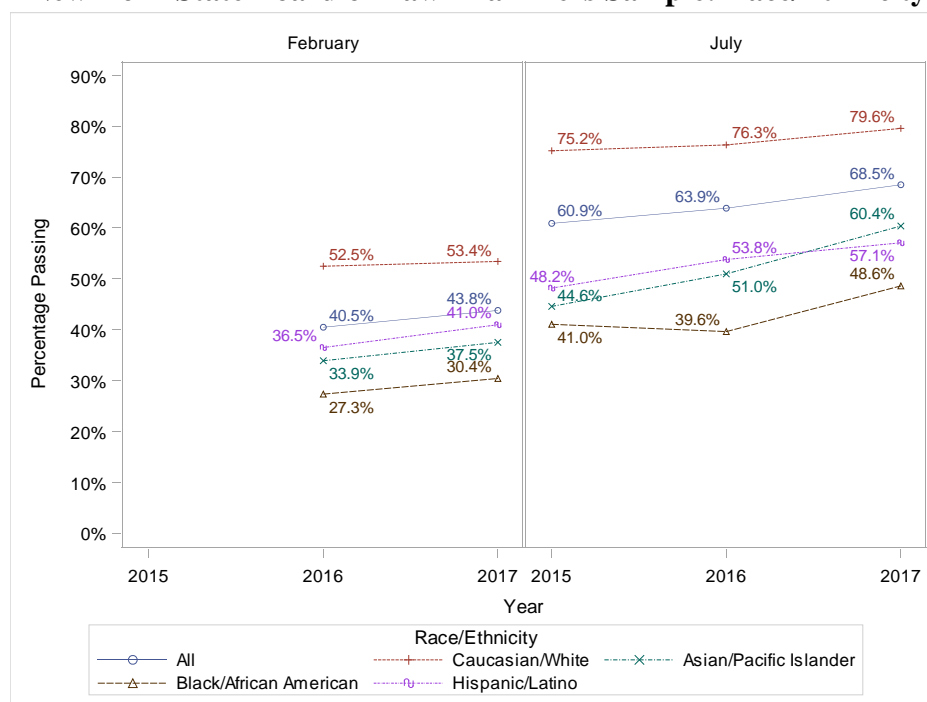
Figure 4.2.29
Distributions of July Bar Exam Scores
Black/African American Candidates
New York State Board of Law Examiners Sample
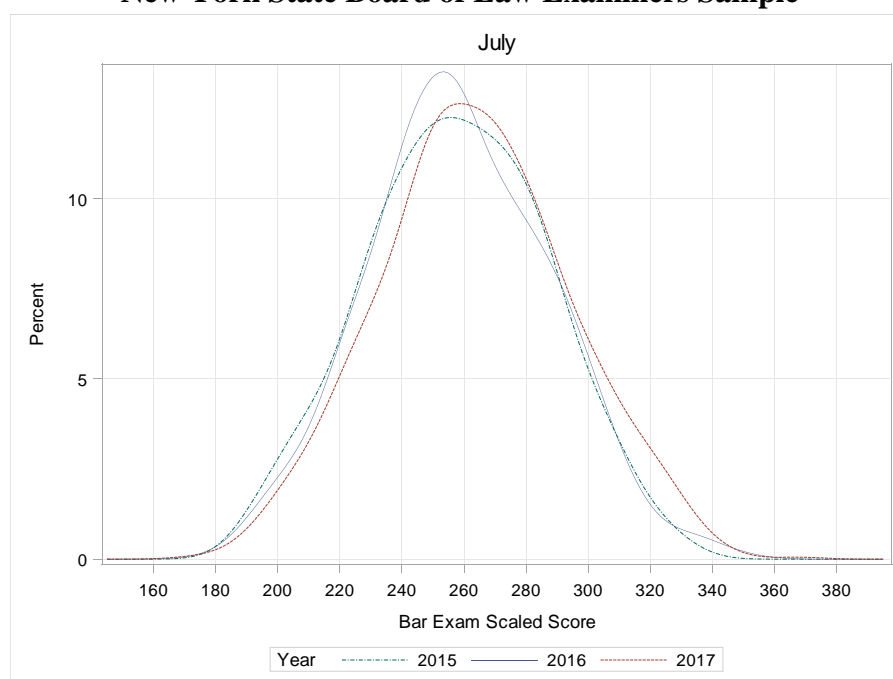
4.2.5 Domestic-Educated NYSBLE Sample by Race/Ethnicity

Average MBE scores for domestic-educated candidates differed by racial/ethnic group.[48] The Caucasian/White group had the highest means, followed by the Hispanic/Latino group (in February) or the Asian/Pacific Islander group (in July), and then the Black/African American group (see Table 4.2.17, Figure 4.2.30, and Figure 4.2.31).

In February, average MBE scores increased by 0.8 points for the Black/African American group and 0.7 points for the Asian/Pacific Islander group and average MBE scores decreased by 0.7 points for the Caucasian/White group and 0.2 points for the Hispanic/Latino group. In July, average scores increased 5.3 points for the Asian/Pacific Islander group, 3.6 points for the Caucasian/White group, 3.3 points for the Black/African American and Hispanic/Latino groups. In addition, the Hispanic/Latino average scores leveled off between July 2016 and July 2017 compared to other groups, increasing from 138.82 to 139.30.

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[48] Results for additional racial/ethnic groups are provided in Appendix K.

Table 4.2.17
MBE Score Means and Standard Deviations
Domestic-Educated New York State Board of Law Examiners Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	136.28	135.54	144.99	146.52	148.58
(SEM 0.2 to 0.4)	(SD)	(14.62)	(14.96)	(15.25)	(16.06)	(16.40)
	N	1115	1137	4633	4333	3882
Asian/Pacific Islander	Mean	131.16	131.89	138.58	141.44	143.88
(SEM 0.5 to 0.8)	(SD)	(14.38)	(12.83)	(15.28)	(15.66)	(16.91)
	N	363	337	1050	1074	1054
Black/African American	Mean	127.75	128.55	131.36	133.02	134.95
(SEM 0.5 to 0.7)	(SD)	(12.96)	(13.14)	(14.06)	(14.97)	(15.38)
	N	366	423	678	687	727
Hispanic/Latino	Mean	132.89	132.67	135.98	138.82	139.30
(SEM 0.8 to 1.0)	(SD)	(12.95)	(13.28)	(15.16)	(15.48)	(15.10)
	N	154	187	377	425	385
All*	Mean	133.18	133.24	141.71	143.27	145.19
(SEM 0.2 to 0.3)	(SD)	(14.53)	(14.44)	(15.89)	(16.52)	(16.99)
	N	2346	2370	7513	7292	6776

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.2.30
Boxplots of MBE Scores
Domestic-Educated New York State Board of Law Examiners Sample: Race/Ethnicity

Figure 4.2.31
Means of MBE Scores
Domestic-Educated New York State Board of Law Examiners Sample: Race/Ethnicity
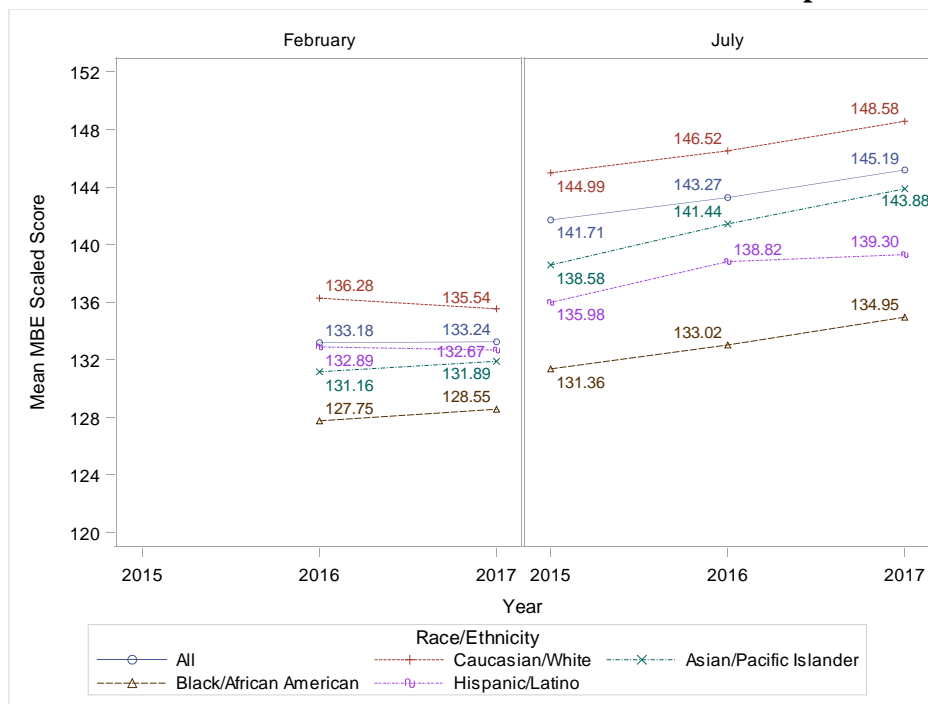
Table 4.2.18, Figure 4.2.32, and Figure 4.2.33 contain summaries of written scores for domestic-educated candidates by race/ethnicity. Similar to MBE, average written scores generally differed by race/ethnicity across each February and July bar exam. The Caucasian/White group had the highest average, followed by the Asian/Pacific Islander group or Hispanic/Latino group, and then the Black/African American group.

Average written scores increased across February exams and across July exams, with the exception of the Black/African American group in July 2016, where the mean decreased between July 2015 and July 2016 from 132.46 to 131.68 (roughly 0.8 points) before increasing to 134.08 in July 2017. Of the four groups, the Asian/Pacific Islander group saw larger increases in average written scores across Februarys (131.58 to 134.78) and across Julys (138.48 to 142.33 to 145.44) compared to the other groups. Increases in average scores between July 2015 and July 2017 were almost 7 points for the Asian/Pacific Islander group, 4.5 points for the Caucasian/White group, almost 3.5 points for the Hispanic/Latino group, and 1.6 points for the Black/African American group.

Table 4.2.18
Written Score Means and Standard Deviations
Domestic-Educated New York State Board of Law Examiners Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	134.71	135.99	144.64	146.93	149.17
(SEM 0.2 to 0.5)	(SD)	(15.34)	(15.53)	(15.49)	(16.26)	(16.72)
	N	1115	1137	4633	4333	3882
Asian/Pacific Islander	Mean	131.58	134.78	138.48	142.33	145.44
(SEM 0.5 to 0.8)	(SD)	(14.69)	(13.99)	(15.86)	(16.35)	(16.89)
	N	363	337	1050	1074	1054
Black/African American	Mean	127.51	127.88	132.46	131.68	134.08
(SEM 0.6 to 0.7)	(SD)	(13.49)	(12.92)	(15.27)	(15.01)	(15.82)
	N	366	423	678	687	727
Hispanic/Latino	Mean	131.63	132.25	136.52	138.25	140.01
(SEM 0.7 to 1.2)	(SD)	(14.70)	(13.15)	(15.97)	(15.34)	(15.43)
	N	154	187	377	425	385
All*	Mean	132.25	133.63	141.56	143.53	145.74
(SEM 0.2 to 0.3)	(SD)	(15.02)	(14.94)	(16.15)	(16.83)	(17.35)
	N	2346	2370	7513	7292	6776

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.2.32
Boxplots of Written Scores
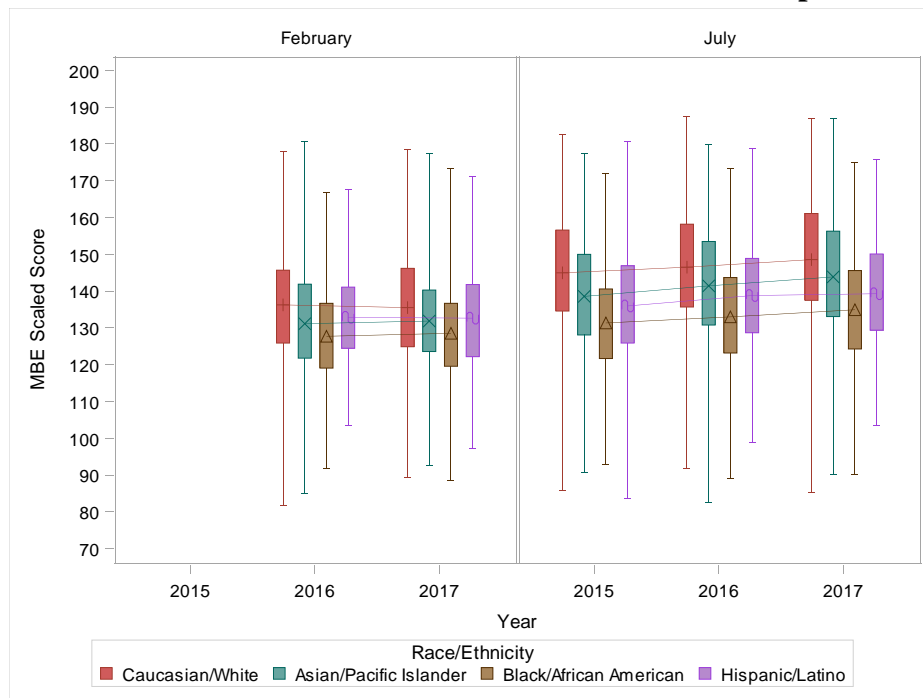**Domestic-Educated New York State Board of Law Examiners Sample: Race/Ethnicity**

Figure 4.2.33
Means of Written Scores
**Domestic-Educated New York State Board of Law Examiners Sample: Race/Ethnicity**
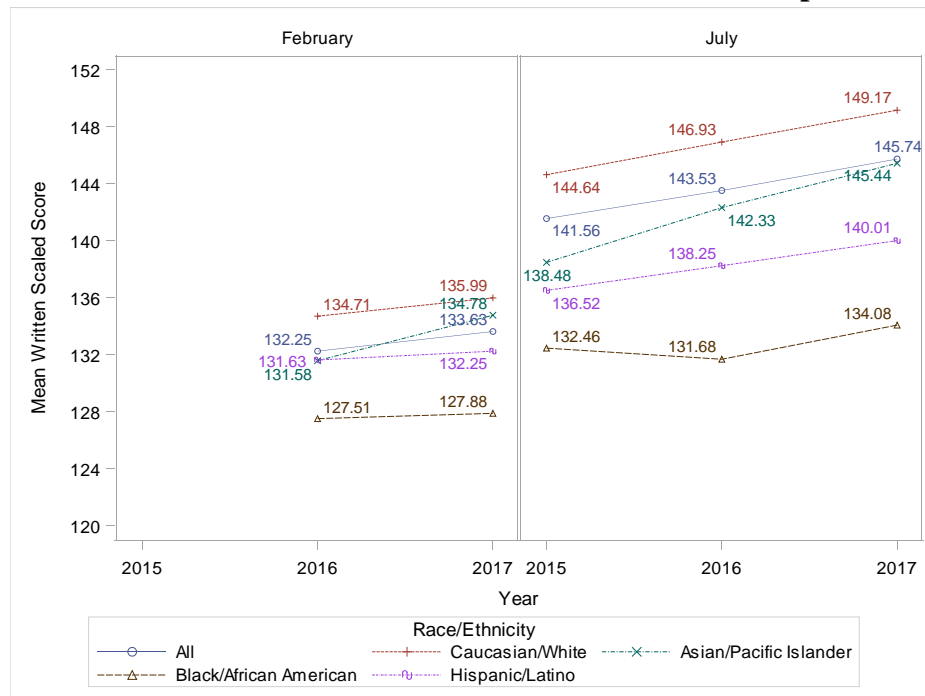
Similar to MBE and written components, average bar exam scores differed across domestic-educated candidates grouped by race/ethnicity (see Table 4.2.19, Figure 4.2.34, and Figure 4.2.35). Average scores were highest for the Caucasian/White group, followed by the Asian/Pacific Islander group or the Hispanic/Latino group, and then the Black/African American group. Scores increased for all groups across Februarys and across Julys. Between July 2015 and July 2017, bar exam scores increased 12.3 points for the Asian/Pacific Islander group, 8.4 points for the Caucasian/White group, 7 points for the Hispanic/Latino group, and 5.3 points for the Black/African American group.

Table 4.2.19
Bar Exam Score Means and Standard Deviations
Domestic-Educated New York State Board of Law Examiners Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	270.68	271.59	289.35	293.50	297.79
(SEM 0.4 to 0.8)	(SD)	(26.74)	(27.30)	(27.79)	(29.81)	(30.87)
	N	1115	1137	4633	4333	3882
Asian/Pacific Islander	Mean	262.38	266.71	277.04	283.82	289.38
(SEM 0.9 to 1.4)	(SD)	(25.91)	(23.27)	(28.54)	(29.64)	(31.57)
	N	363	337	1050	1074	1054
Black/African American	Mean	255.18	256.49	263.75	264.74	269.09
(SEM 1.0 to 1.2)	(SD)	(23.44)	(22.55)	(27.04)	(27.40)	(29.00)
	N	366	423	678	687	727
Hispanic/Latino	Mean	264.33	264.98	272.33	277.11	279.37
(SEM 1.4 to 1.9)	(SD)	(24.10)	(23.05)	(28.62)	(28.25)	(28.47)
	N	154	187	377	425	385
All*	Mean	265.19	266.93	283.04	286.85	290.98
(SEM 0.3 to 0.5)	(SD)	(26.50)	(26.20)	(29.33)	(31.01)	(32.18)
	N	2346	2370	7513	7292	6776

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.2.34
Boxplots of Bar Exam Scores
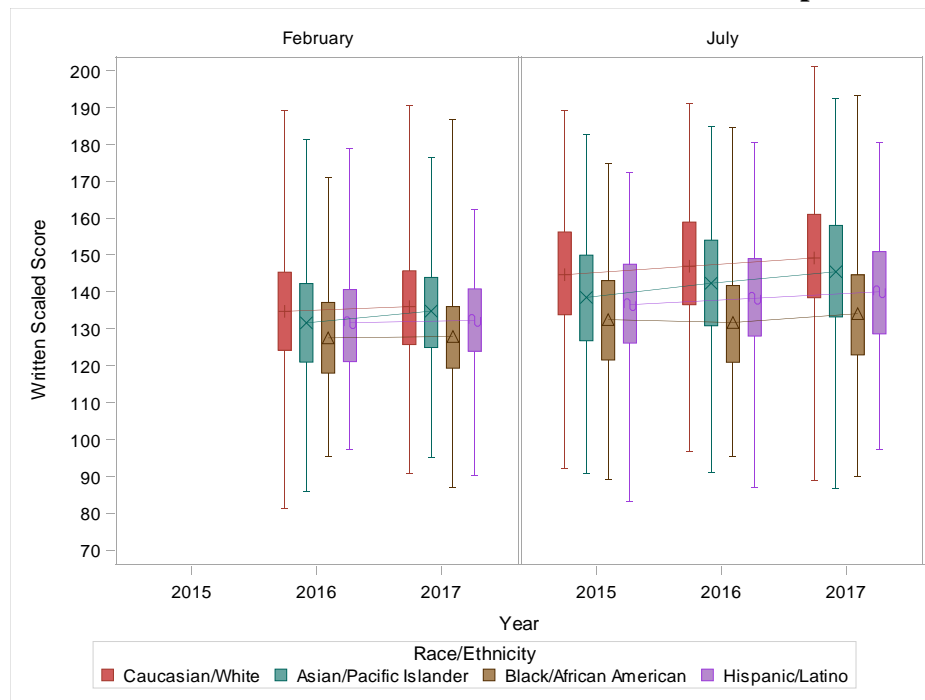**Domestic-Educated New York State Board of Law Examiners Sample: Race/Ethnicity**
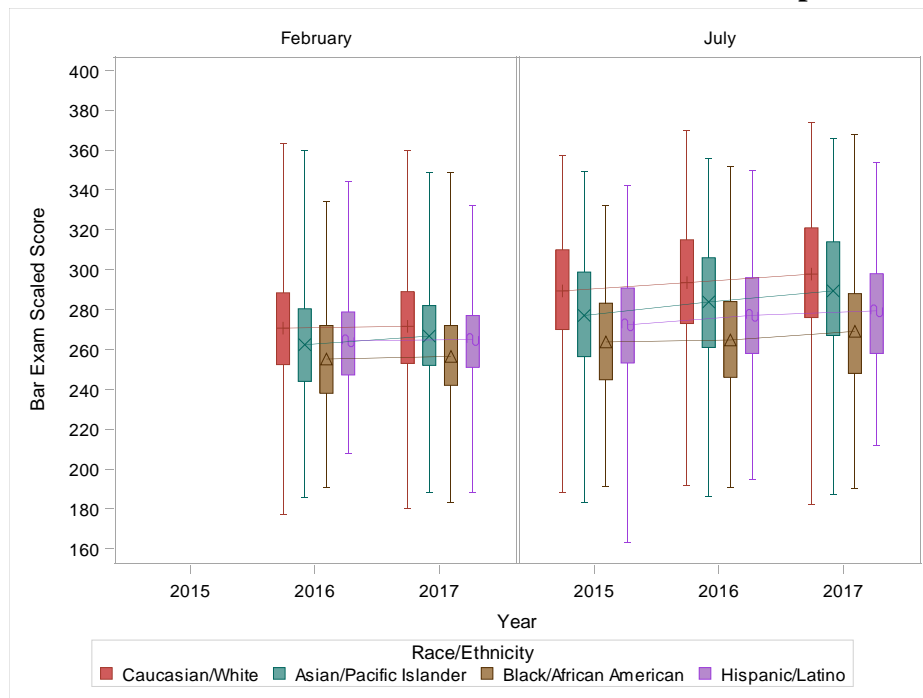
Figure 4.2.35
Means of Bar Exam Scores
Domestic-Educated New York State Board of Law Examiners Sample: Race/Ethnicity
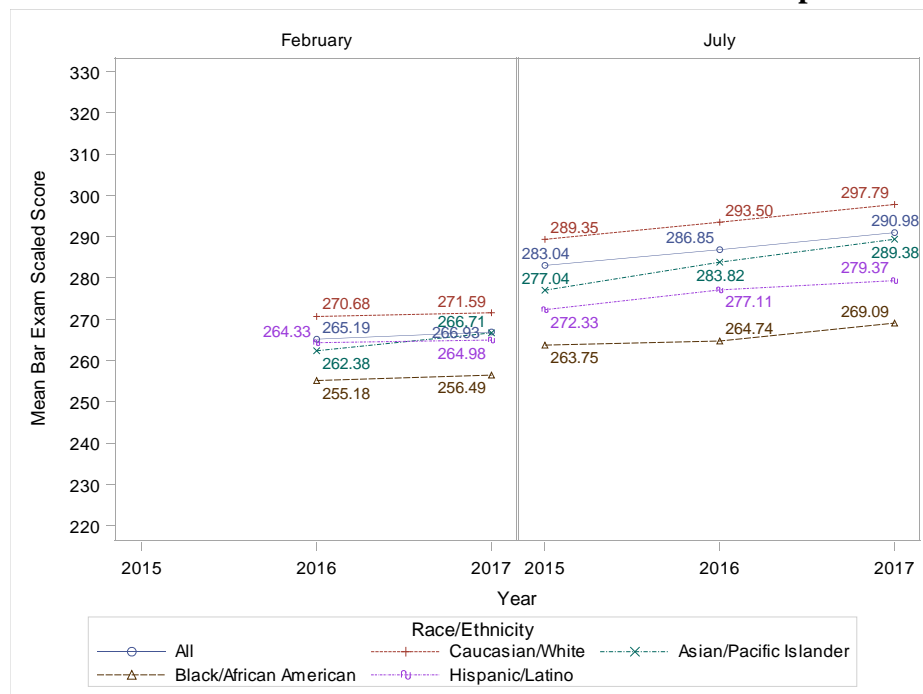
Patterns of pass rates tended to be similar to the pattern of average bar exam scores, with the exception of the Black/African American group, which had pass rates decline from 49.1% in July 2015 to 47.7% in July 2016 before recovering to 55.7% in July 2017 (see Table 4.2.20 and Figure 4.2.36). This decline was also observed for the entire NYSBLE sample, where we explained that the distribution of bar exam scores determined how the average bar exam score can increase yet the pass rate can decrease. Otherwise, pass rates differed across groups and tended to increase for each group across Februarys and across Julys. If we compare July 2015 to July 2017, pass rates increased 11.3 percentage points for the Asian/Pacific Islander group, 8.9 percentage points for the Hispanic/Latino group, 6.6 percentage points for the Black/African American group, and 4.1 percentage points for the Caucasian/White group.

Table 4.2.20
Pass Rates
Domestic-Educated New York State Board of Law Examiners Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White		57.1%	58.3%	80.3%	82.0%	84.4%
(SEM = 1)	N	1115	1137	4633	4333	3882
Asian/Pacific Islander		45.7%	51.6%	65.6%	72.9%	76.9%
(SEM 1 to 3)	N	363	337	1050	1074	1054
Black/African American		33.9%	35.5%	49.1%	47.7%	55.7%
(SEM = 2)	N	366	423	678	687	727
Hispanic/Latino		48.1%	50.3%	58.9%	66.1%	67.8%
(SEM 2 to 4)	N	154	187	377	425	385
All*		48.7%	51.5%	72.5%	75.1%	78.0%
(SEM = 1)	N	2346	2370	7513	7292	6776

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.2.36
Pass Rates
Domestic-Educated New York State Board of Law Examiners Sample: Race/Ethnicity
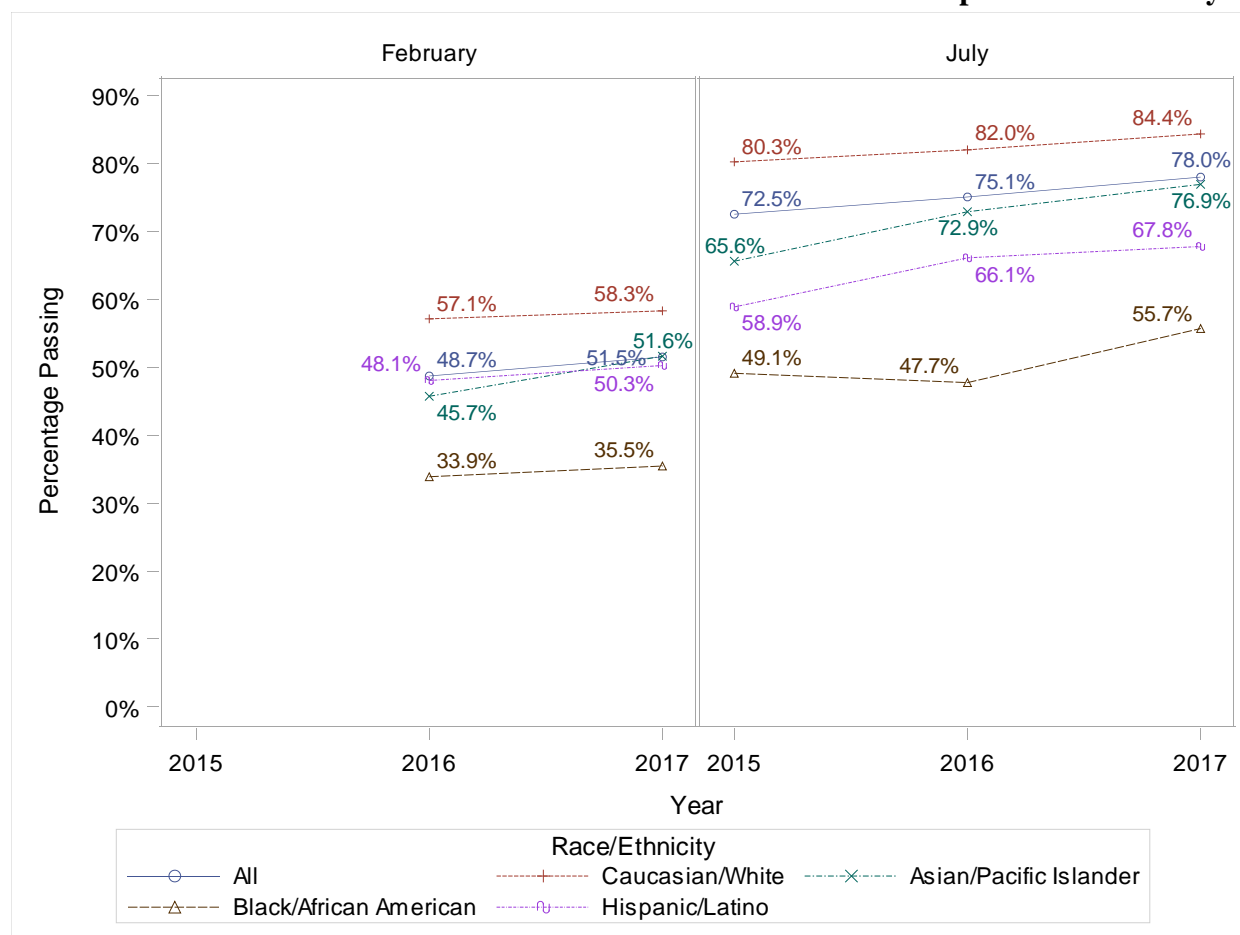
4.2.6 Domestic-Educated First-time Taker NYSBLE Sample by Race/Ethnicity

Average MBE scores for domestic-educated first-time takers in the NYSBLE sample differed by racial/ethnic group (see Table 4.2.21, Figure 4.2.37, and Figure 4.2.38).[49] The Caucasian/White group had the highest means, followed by the Hispanic/Latino group (in February) or the Asian/Pacific Islander group (in July), and then the Black/African American group.

Average MBE scores increased for each July exam and for Asian/Pacific Islander and Black/African American groups across Februarys. Average MBE scores in February declined for Hispanic/Latino (roughly 2.8 points) and Caucasian/White (roughly 0.5 points) groups. In July, scores increased the most for the Asian/Pacific Islander group (5.8 points), followed by the

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[49] Results for additional racial/ethnic groups are provided in Appendix K.

Black/African American group (4.8 points), Caucasian/White group (4.3 points), and Hispanic/Latino group (3.7 points).

Table 4.2.21
MBE Score Means and Standard Deviations
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	143.45	142.98	146.75	148.67	151.01
(SEM 0.2 to 0.7)	(SD)	(15.37)	(15.43)	(14.37)	(15.00)	(15.09)
	N	450	511	4229	3894	3467
Asian/Pacific Islander	Mean	136.49	137.44	141.06	144.29	146.83
(SEM 0.5 to 1.7)	(SD)	(17.02)	(13.89)	(14.68)	(14.65)	(15.95)
	N	99	108	884	897	884
Black/African American	Mean	130.42	131.57	134.42	136.26	139.18
(SEM 0.6 to 1.4)	(SD)	(14.24)	(15.10)	(13.44)	(14.66)	(15.08)
	N	105	117	490	483	492
Hispanic/Latino	Mean	140.65	137.81	138.68	140.97	142.37
(SEM 0.8 to 2.0)	(SD)	(13.39)	(14.52)	(14.62)	(15.04)	(14.33)
	N	44	62	299	359	304
All*	Mean	140.10	140.18	144.15	146.11	148.37
(SEM 0.2 to 0.6)	(SD)	(16.09)	(15.74)	(14.95)	(15.42)	(15.70)
	N	803	905	6536	6232	5742

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.2.37
Boxplots of MBE Scores
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Race/Ethnicity

Figure 4.2.38
Means of MBE Scores
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Race/Ethnicity
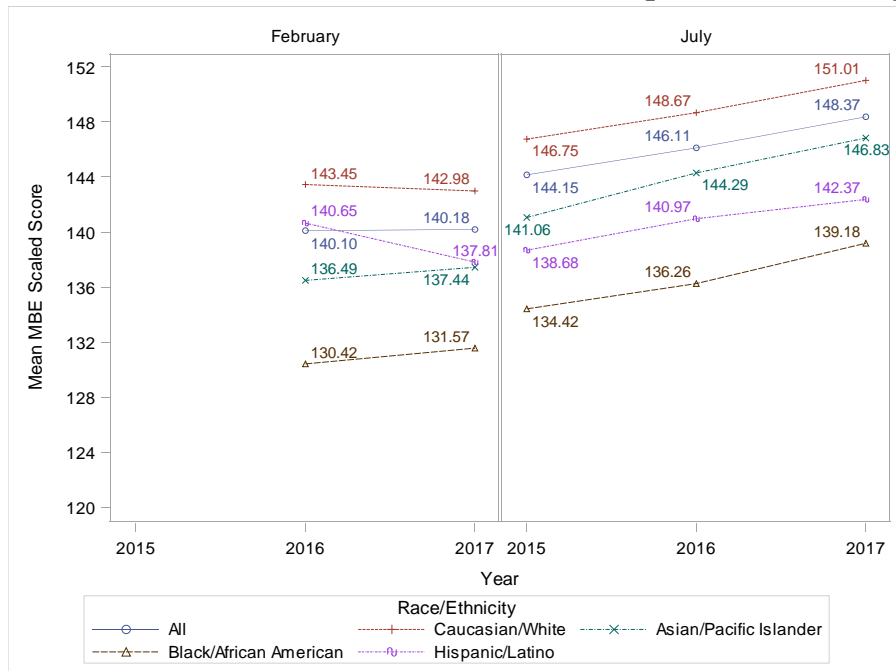
Similar to the entire NYSBLE sample and the domestic-educated group, domestic-educated first-time takers showed differences in average written scores across February exams and July exams. The Caucasian/White group had the highest means followed by the Asian/Pacific Islander group or Hispanic/Latino group (in February 2016), and then the Black/African American group (see Table 4.2.22, Figure 4.2.39 or Figure 4.2.40). As might be expected, average scores were higher for the domestic-educated first-time taker group compared to those in the domestic-group or entire NYSBLE sample.

Across February exams and across July exams, average written scores increased for each group with the exception of July 2016 scores for the Black/African American group, where the average written score decreased to 134.72 compared to 135.80 in July 2015 and 138.12 in July 2017. A similar decrease was observed for the Black/African American group in the domestic-educated and the entire NYSBLE samples. Between July 2015 and July 2017, scores increased by 7.7 points for the Asian/Pacific Islander group, 5.3 points for the Caucasian/White group, 4.2 points for the Hispanic/Latino group, and 2.3 points for the Black/African American group. Groups differed in how rapidly scores increased across July exams, with the Asian/Pacific Islander group showing the largest gains and the Black/African American group showing the most modest gains. In February, the Asian/Pacific Islander group showed the largest gain in average written scores and the Hispanic/Latino group showed the most modest gain.

Table 4.2.22
Written Score Means and Standard Deviations
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	140.18	142.92	146.34	149.08	151.59
(SEM 0.2 to 0.8)	(SD)	(17.21)	(15.91)	(14.62)	(15.17)	(15.51)
	N	450	511	4229	3894	3467
Asian/Pacific Islander	Mean	135.28	139.93	140.95	145.39	148.69
(SEM 0.5 to 1.7)	(SD)	(17.10)	(15.56)	(15.09)	(15.23)	(15.70)
	N	99	108	884	897	884
Black/African American	Mean	129.48	132.46	135.80	134.72	138.12
(SEM 0.7 to 1.4)	(SD)	(14.75)	(13.62)	(14.42)	(15.00)	(15.94)
	N	105	117	490	483	492
Hispanic/Latino	Mean	136.45	137.31	139.07	140.57	143.23
(SEM 0.8 to 2.6)	(SD)	(17.42)	(15.31)	(15.47)	(14.77)	(14.90)
	N	44	62	299	359	304
All*	Mean	137.64	140.28	143.96	146.43	148.96
(SEM 0.2 to 0.6)	(SD)	(17.25)	(15.95)	(15.13)	(15.72)	(16.16)
	N	803	905	6536	6232	5742

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.2.39
Boxplots of Written Scores
Domestic-Educated First-Time Takers
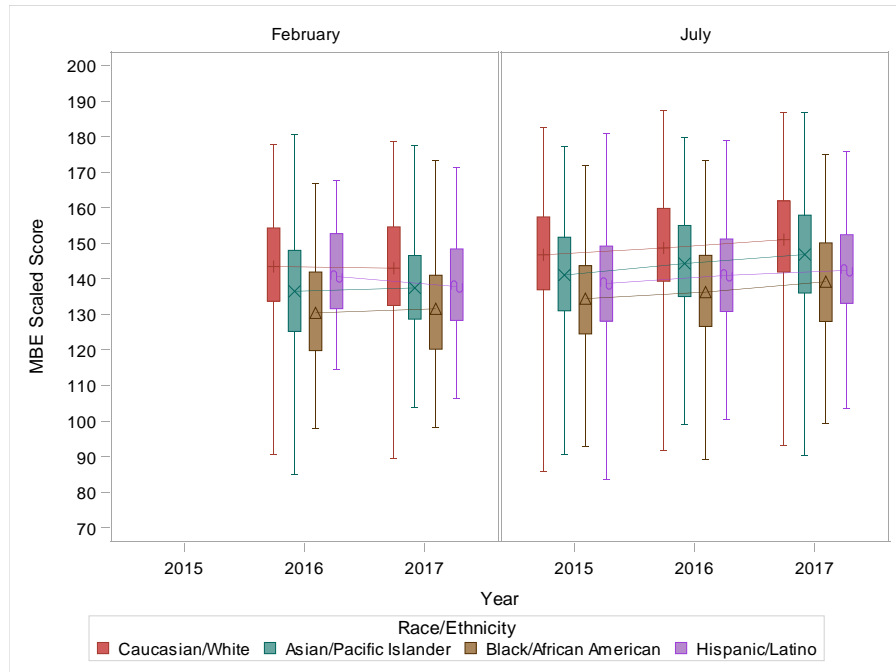**New York State Board of Law Examiners Sample: Race/Ethnicity**

Figure 4.2.40
Means of Written Scores
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Race/Ethnicity
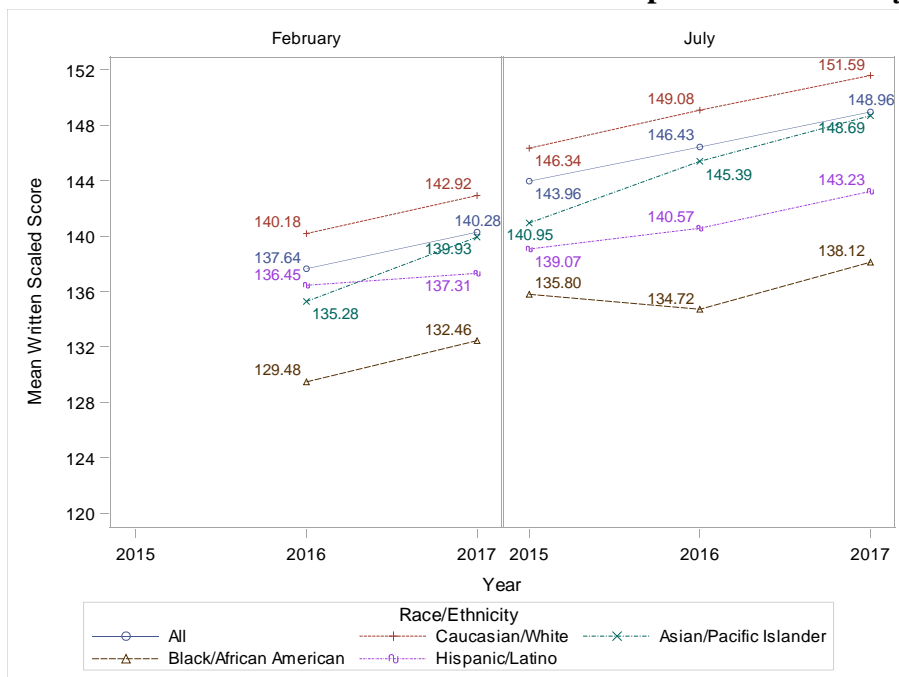
Average bar exam scores differed across groups (see Table 4.2.23, Figure 4.2.41, and Figure 4.2.42). Average scores were highest for the Caucasian/White group, followed by the Asian/Pacific Islander group or Hispanic/Latino group (February 2017), and then the Black/African American group. Scores increased for all groups across Februarys and across Julys, except for the Hispanic/Latino group, which had average bar exam scores decrease of 1.6 points between February 2016 and February 2017. Between July 2015 and July 2017, bar exam scores increased 13.6 points for the Asian/Pacific Islander group, 9.9 points for the Caucasian/White group, almost 8 points for the Hispanic/Latino group, and 7.1 points for the Black/African American group.

Table 4.2.23
Bar Exam Score Means and Standard Deviations
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	283.04	285.99	292.77	297.80	302.64
(SEM 0.4 to 1.4)	(SD)	(29.57)	(28.37)	(25.85)	(27.51)	(28.18)
	N	450	511	4229	3894	3467
Asian/Pacific Islander	Mean	271.35	277.40	281.95	289.74	295.58
(SEM 0.9 to 3.1)	(SD)	(31.11)	(26.76)	(26.97)	(27.34)	(29.25)
	N	99	108	884	897	884
Black/African American	Mean	260.05	264.06	270.26	271.02	277.36
(SEM 1.2 to 2.6)	(SD)	(26.25)	(25.84)	(25.47)	(27.22)	(28.82)
	N	105	117	490	483	492
Hispanic/Latino	Mean	276.81	275.21	277.66	281.58	285.65
(SEM 1.4 to 4.2)	(SD)	(27.92)	(26.58)	(27.56)	(27.26)	(27.23)
	N	44	62	299	359	304
All*	Mean	277.31	280.53	287.86	292.59	297.37
(SEM 0.3 to 1.1)	(SD)	(30.45)	(28.87)	(27.17)	(28.65)	(29.54)
	N	803	905	6536	6232	5742

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.2.41
Boxplots of Bar Exam Scores
Domestic-Educated First-Time Takers
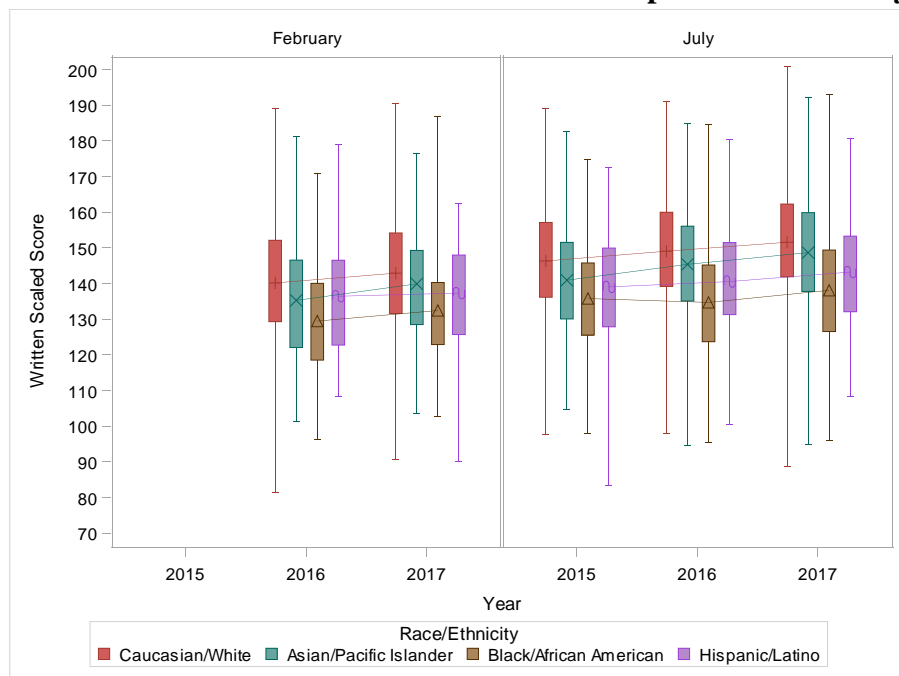## New York State Board of Law Examiners Sample: Race/Ethnicity

Figure 4.2.42
Means of Bar Exam Scores
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Race/Ethnicity
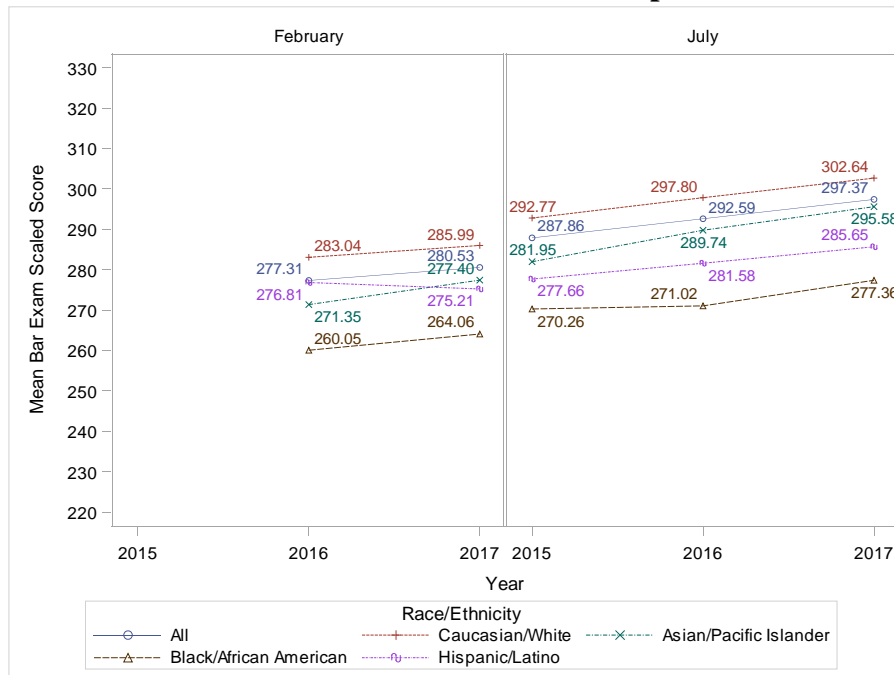
Pass rates for domestic-educated first-time takers differed across racial/ethnic groups and increased across Februarys and across Julys, with the exception of the Black/African American group which had pass rates decline from 58.6% in July 2015 to 57.8% in July 2016 before recovering to 68.5% in July 2017 (see Table 4.2.24 and Figure 4.2.43). This decline was also observed for the domestic-educated sample and the entire NYSBLE sample. Otherwise, pass rates differed across groups and tended to increase across Februarys and across Julys. If we compare July 2015 to July 2017, pass rates increased 12 percentage points for the Asian/Pacific Islander and Hispanic/Latino group, 9.9 percentage points for the Black/African American group, and 5 percentage points for the Caucasian/White group. In other words, the differences in pass rates across groups tended to narrow for domestic-educated first-time takers in the NYSBLE sample across July 2015 and July 2017 (differences also tended to narrow in February).

Table 4.2.24
Pass Rates
Domestic-Educated First-Time Takers
New York State Board of Law Examiners Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White		75.8%	77.9%	85.1%	87.5%	90.1%
(SEM 1 to 2)	N	450	511	4229	3894	3467
Asian/Pacific Islander		58.6%	63.9%	73.0%	81.5%	85.0%
(SEM 1 to 5)	N	99	108	884	897	884
Black/African American		43.8%	51.3%	58.6%	57.8%	68.5%
(SEM 2 to 5)	N	105	117	490	483	492
Hispanic/Latino		61.4%	66.1%	65.6%	73.0%	77.6%
(SEM 2 to 7)	N	44	62	299	359	304
All*		67.1%	70.5%	79.3%	82.8%	86.0%
(SEM <= 2)	N	803	905	6536	6232	5742

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.2.43
Pass Rates
Domestic-Educated First-Time Takers
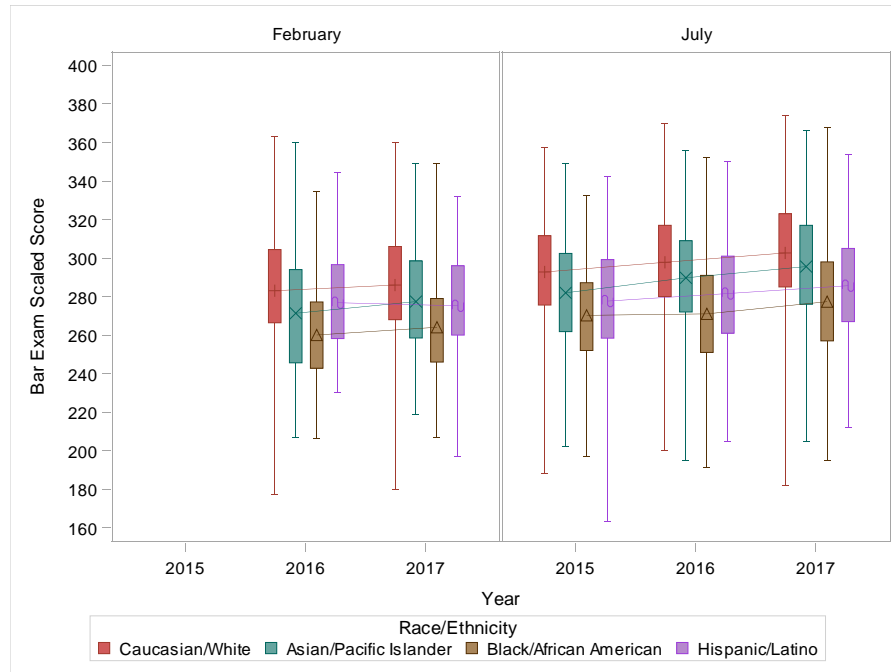**New York State Board of Law Examiners Sample: Race/Ethnicity**
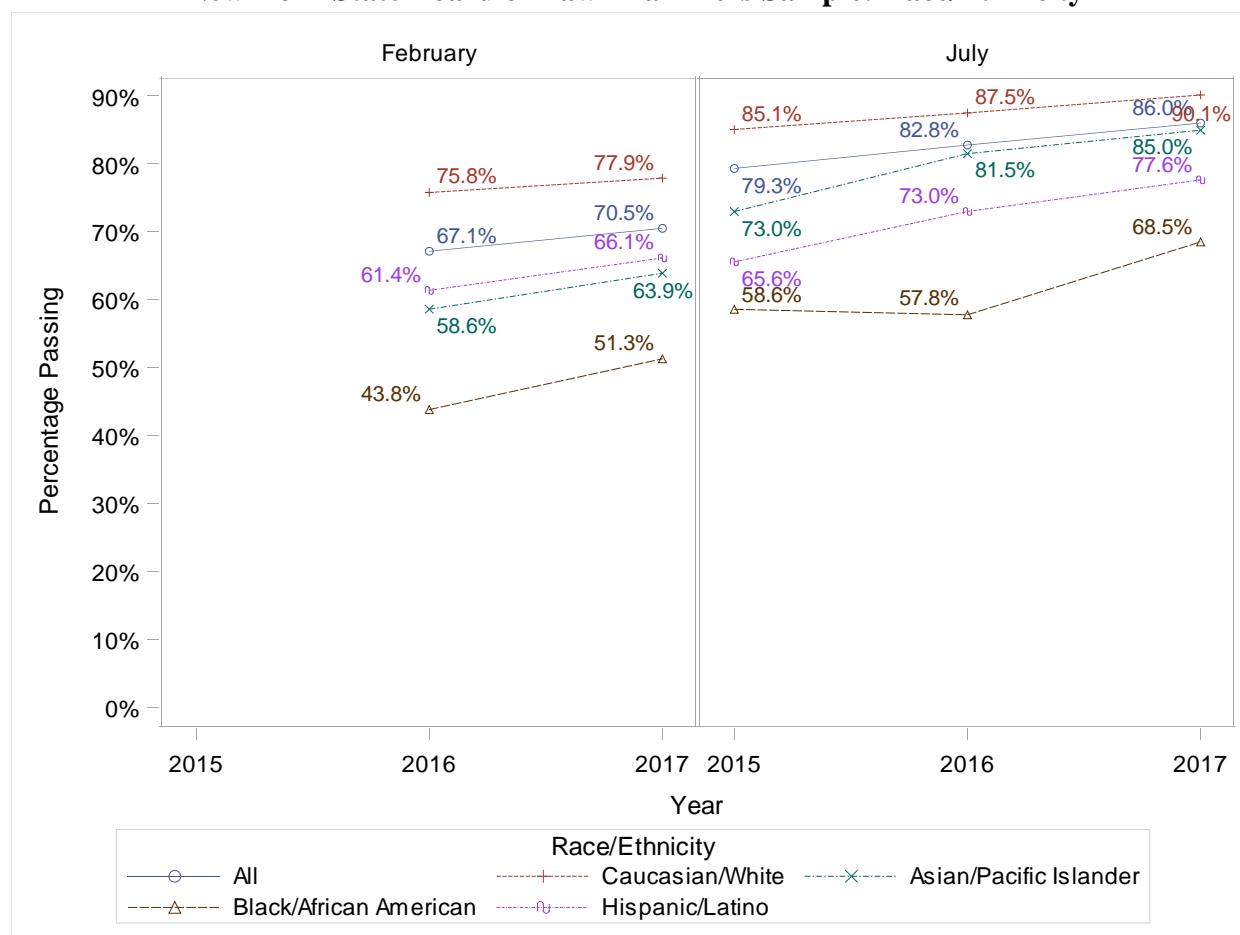
Patterns of performance across the entire NYSBLE sample, domestic-educated, and domestic-educated first-time takers tended to be similar, even though performance was higher for domestic-educated first-time takers, followed by domestic-educated, and then the entire NYSBLE sample. The Caucasian/White group tended to score highest, followed by either the Asian/Pacific Islander or Hispanic/Latino group, and then the Black/African American group. Performance on the bar exam tended to increase for each group across years, particularly for July exams. However, the Black/African American group tended to have pass rates that dipped slightly in July 2016, after UBE adoption, before recovering in July 2017. This pattern was completely consistent with patterns observed in average background characteristics (UGPA, LSAT score, and LGPA) in section 3, although (a) they didn't tend to increase much between July 2015 and July 2016 and (b) 4-point LGPA did decrease between July 2015 and July 2016. The dip was likely driven by changes in average written scores for the Black/African American

group in July 2016. Because scores and pass rates appeared to recover in July 2017, it did not appear that the dip in pass rate in July 2016 was sustained or systematically due to the UBE.

4.3 School-based Sample Scores and Pass Rates

This section contains analysis of MBE scores, written scores, bar exam scores, and pass rates first by gender, then by race/ethnicity, for the entire school-based sample (which includes only domestic-educated candidates) and first-time takers in the school-based sample (also, domestic-educated only).[50] The school-based sample is analyzed here for two reasons. First, the results below can be compared to section 4.2 to review the extent to which the school-based sample is a reasonable representation of the entire NYSBLE sample; if scores and pass rates are different across domestic-educated candidates in the NYSBLE and school-based sample, for example, it indicates that results of analysis using the school-based sample may not adequately generalize to domestic-educated candidates in the NYSBLE sample. As reported in section 2.3, the school-based sample February candidates appeared less representative of the NYSBLE than July. Second, analysis of the school-based sample continues the analysis of background characteristics from section 3 with bar exam scores and pass rates using the same group of candidates. Specifically, differences observed in bar exam performance across groups (i.e., gender, race/ethnicity) can be compared to performance on background characteristics in section 3 to determine the extent to which differences across groups were consistent across variables for the same sample of candidates. To preview, differences were observed across gender and racial/ethnic groups in bar exam performance that were also observed in background characteristics like UGPAs, LSAT scores, and LGPAs. In addition, similar to background characteristics, average bar exam performance tended to remain the same or increase for candidates across February bar exams and July bar exams. Because performance on background characteristics also tended to increase, and background characteristics and bar exam performance were related, improved performance on the bar exam observed after UBE adoption was likely due, at least in part, to changes in the group of candidates testing rather than to the UBE.

4.3.1 School-based Sample by Gender

Table 4.3.1 contains the means and standard deviations of MBE scores for candidates in the school-based sample by gender across bar exams. In addition, Figure 4.3.1 contains boxplots and Figure 4.3.2 contains plots of means by gender across bar exams. Across July bar exams, average MBE scores for males were higher than females and average scores increased for both groups. The difference between males and females was 4.7 points in July 2015, 5.1 points in July 2016, and 3.7 points in July 2017. In other words, the difference in average MBE scores

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[50] Performance and pass rates for groups by gender and race/ethnicity can be found in Appendix L for the school-based sample and Appendix M for first-time takers in the school-based sample. Appendix N contains performance and pass rates for additional racial/ethnic groups.

decreased across July 2015 and 2017 exams. In February, average MBE scores were higher for males in 2016 but slightly lower than females in 2017. Males saw a slight decline in average MBE scores across Februarys (0.13 points) and females saw an increase (3.05 points), such that average differences between males and females changed from 3.15 points favoring males to 0.04 points favoring females for those candidates included in the school-based sample.

One of the challenges in comparing bar exam performance across time using the school-based sample is that the characteristics of candidates included in the sample may have also shifted over time and may not be similarly representative of domestic-educated candidates in New York. February results for the school-based sample (4.3.2) appeared to differ from domestic-educated candidates in the NYSBLE sample (Figure 4.2.9). This is consistent with observations we made earlier in section 3 and section 2 suggesting that the February candidates included in the school-based sample may be less representative of the entire domestic-educated NYSBLE group than the July candidates. Throughout this section, the February results tended to be different from the results for comparable NYSBLE groups in section 4.2, so we will put less emphasis on the February results and would not recommend generalizing the school-based sample in February to the entire domestic-educated NYSBLE sample. The July results, on the other hand, did not appear as different in the school-based sample compared to the NYSBLE sample, but still requires caution when generalizing to the domestic-educated NYSBLE sample. Despite these potential limitations, it is still worth considering bar exam performance and pass rates for the school-based sample in February because this performance can still be compared to background characteristics given the available school-based sample of candidates; even if the group doesn't appear to generalize well to the entire group of domestic-educated candidates in New York, it can tell us something about the group's performance on the bar exam and their background characteristics.

Table 4.3.1
MBE Score Means and Standard Deviations
School-based Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	126.89	129.94	140.36	142.53	146.53
(SEM 0.3 to 0.6)	(SD)	(10.29)	(10.88)	(16.09)	(15.73)	(15.81)
	N	265	393	1037	2223	1844
Male	Mean	130.04	129.91	145.10	147.59	149.80
(SEM 0.3 to 0.7)	(SD)	(11.82)	(12.06)	(16.21)	(15.83)	(15.98)
	N	265	329	1027	2266	1880
All*	Mean	128.45	129.95	142.75	145.10	148.19
(SEM 0.2 to 0.5)	(SD)	(11.19)	(11.43)	(16.30)	(15.96)	(15.97)
	N	534	723	2084	4520	3753

* All includes candidates omitting their gender.

Figure 4.3.1
Boxplots of MBE Scores
School-based Sample: Gender
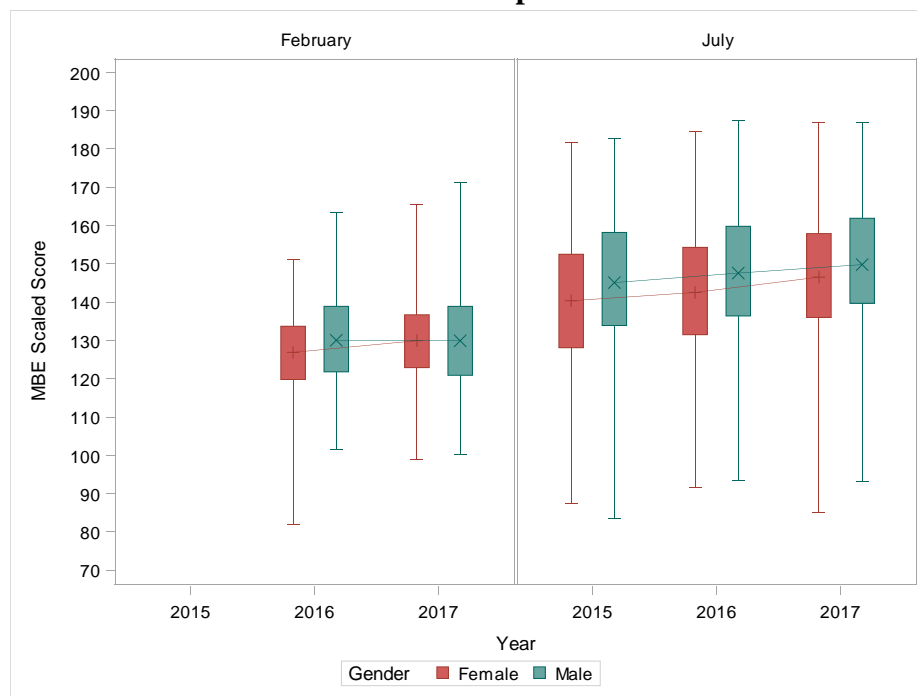
Figure 4.3.2
Means of MBE Scores
School-based Sample: Gender
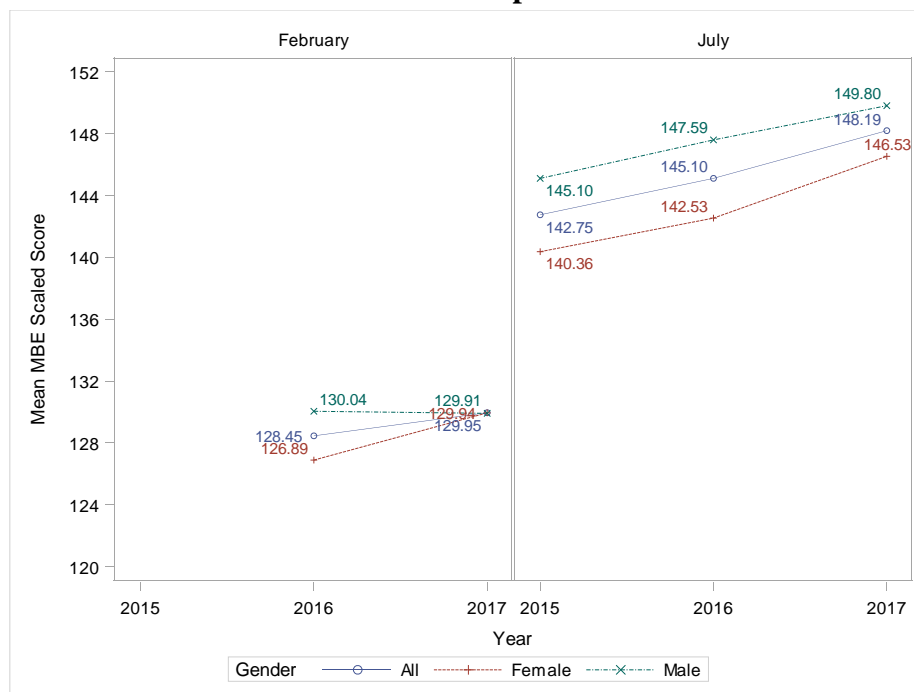
Table 4.3.2, Figure 4.3.3, and Figure 4.3.4 contain written scores for the school-based sample. Average written scores tended to be higher for females than males, with the exception of July 2016, where males had slightly higher average written scores than females (145.68 versus 145.59). The February differences between average written scores across gender were larger than July, with February differences in averages across gender of 2.7 and 4 points favoring females and July differences in averages of 1.6 points favoring females, 0.1 point favoring males, and 2 points favoring females. Average written scores increased for both groups across February and July exams.

Table 4.3.2
Written Score Means and Standard Deviations
School-based Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	129.54	133.24	143.53	145.59	150.06
(SEM 0.3 to 0.7)	(SD)	(11.94)	(12.29)	(16.20)	(16.02)	(16.22)
	N	265	393	1037	2223	1844
Male	Mean	126.89	129.25	141.90	145.68	148.09
(SEM 0.3 to 0.7)	(SD)	(12.13)	(11.83)	(16.29)	(16.27)	(16.51)
	N	265	329	1027	2266	1880
All*	Mean	128.19	131.43	142.73	145.65	149.05
(SEM 0.2 to 0.5)	(SD)	(12.13)	(12.23)	(16.25)	(16.14)	(16.40)
	N	534	723	2084	4520	3753

* All includes candidates omitting their gender.

Figure 4.3.3
Boxplots of Written Scores
School-based Sample: Gender
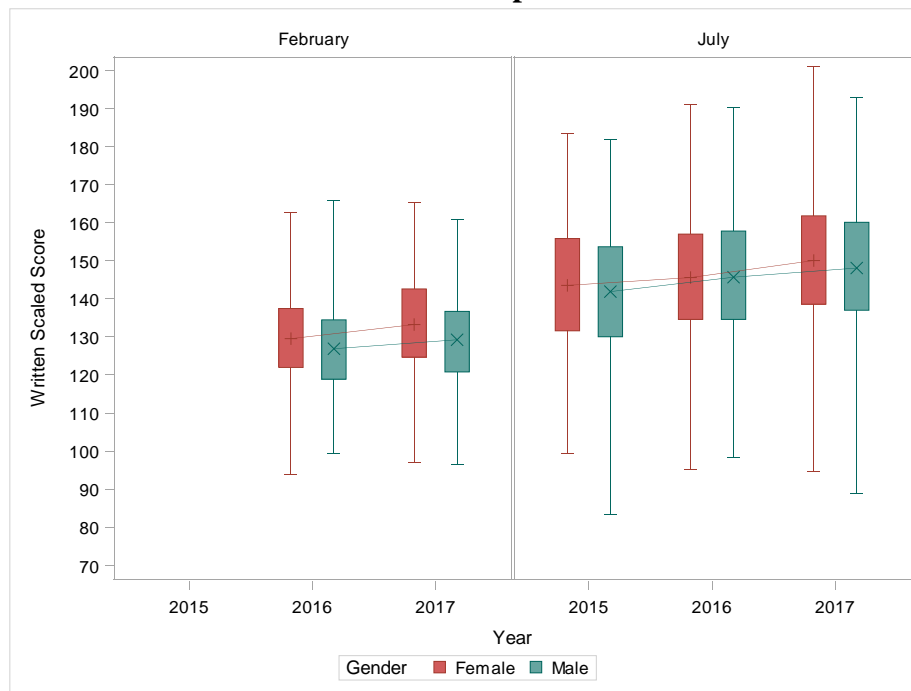
Figure 4.3.4
Means of Written Scores
School-based Sample: Gender
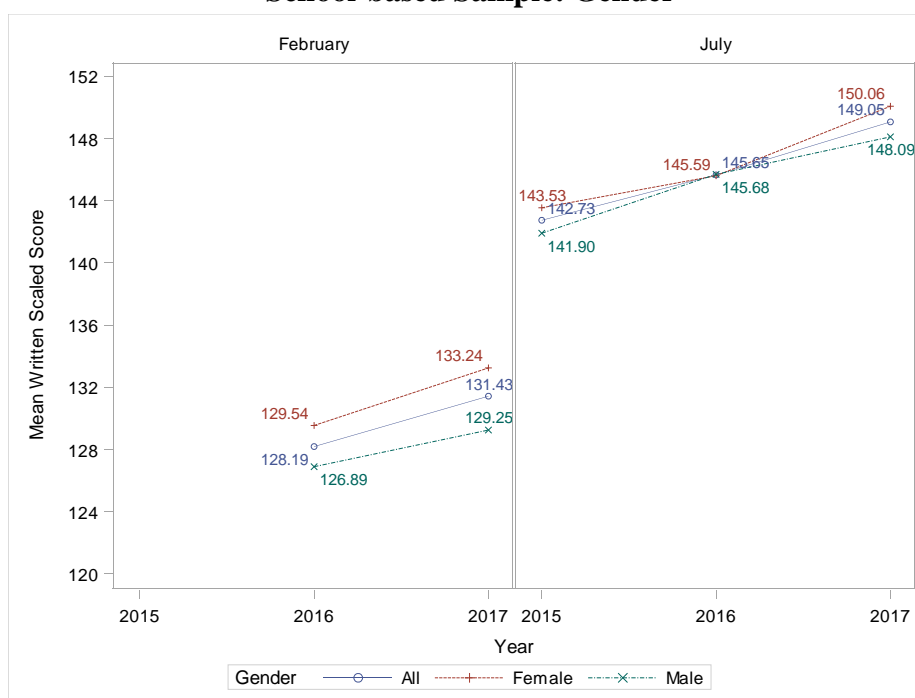
Table 4.3.3, Figure 4.3.5, and Figure 4.3.6 contain summaries of bar exam scores by gender for the school-based sample. Females tended to score the same or higher, on average, compared to males in February and males scored higher than females in July. Average scores increased across Februarys and across Julys for both groups. Similar to the NYSBLE sample in section 4.2, the difference in average bar exam scores between males and females was larger in July 2016 (5.2 points) compared to July 2015 (2.6 points) or July 2017 (1.3 points). The difference in average bar exam scores between males and females increased immediately after UBE adoption before shrinking the following July to half the difference in average scores prior to UBE adoption.

Compared to the domestic-educated NYSBLE sample (Figure 4.2.13), average bar exam scores for the school-based sample in February were different (Figure 4.3.6), indicating that the school-based sample probably did not well represent the NYSBLE sample in February. For July, average scores were somewhat higher for the school-based sample compared to NYSBLE sample, but the patterns of performance across groups were similar, so that the July school-based sample appeared to reasonably represent the patterns of performance of the entire group of domestic-educated candidates taking the July New York bar exams by gender.

Table 4.3.3
Bar Exam Score Means and Standard Deviations
School-based Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	256.62	263.22	283.86	288.17	296.64
(SEM 0.6 to 1.2)	(SD)	(18.84)	(19.45)	(29.64)	(29.36)	(29.84)
	N	265	393	1037	2223	1844
Male	Mean	256.62	259.23	286.49	293.32	297.93
(SEM 0.6 to 1.2)	(SD)	(19.72)	(19.83)	(29.89)	(29.80)	(30.34)
	N	265	329	1027	2266	1880
All*	Mean	256.56	261.43	285.19	290.80	297.29
(SEM 0.4 to 0.8)	(SD)	(19.35)	(19.71)	(29.75)	(29.68)	(30.10)
	N	534	723	2084	4520	3753

* All includes candidates omitting their gender.

Figure 4.3.5
Boxplots of Bar Exam Scores
School-based Sample: Gender
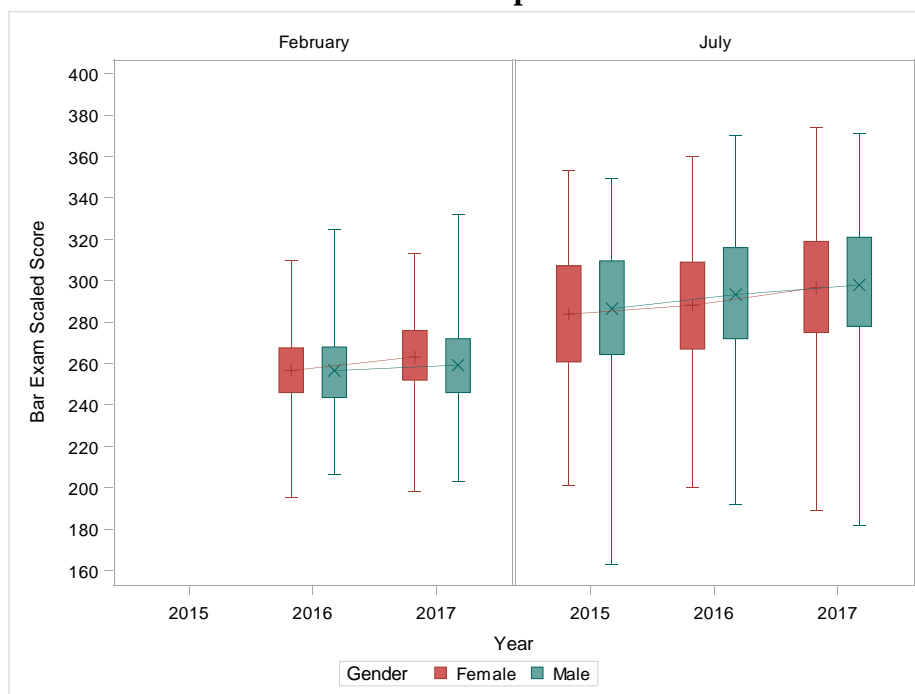
Figure 4.3.6
Means of Bar Exam Scores
School-based Sample: Gender
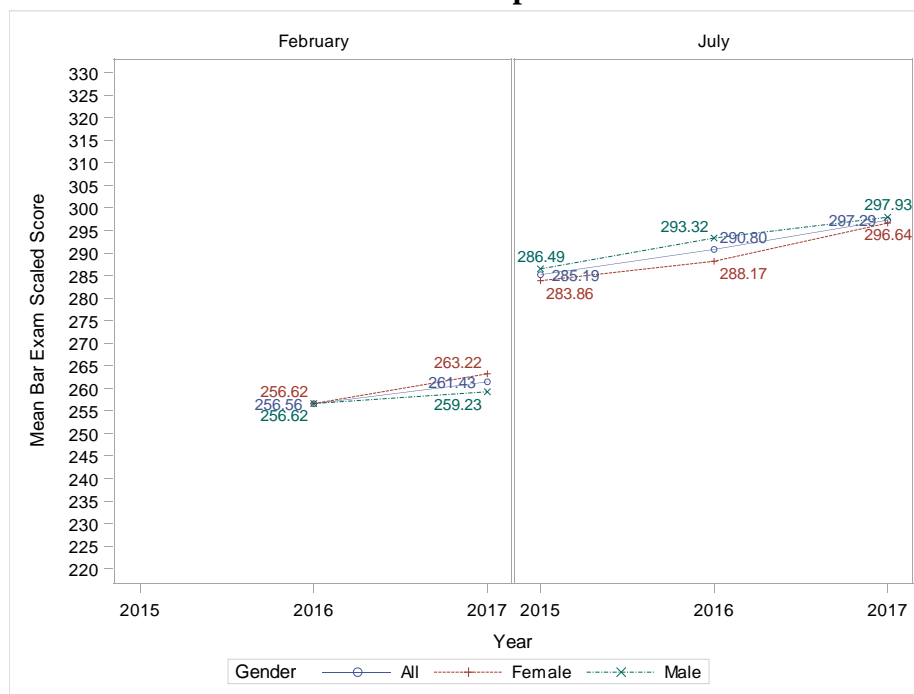
Pass rates by gender for the school-based sample generally showed patterns similar to bar exam scores. Pass rates increased across July exams and across February exams. In July, males had higher pass rates than females, although only slightly higher in July 2017 (85.3% versus 85.1%), and in February 2017 females had higher pass rates than males. Contrary to average bar exam scores in February 2016, which were the same across males and females, pass rates were lower for females. As was explained in section 4.2 for the Black/African American group, the distributions of scores explains the discrepancy in patterns between average bar exam score and pass rates for males and females in February 2016. The difference in average bar exam scores between males and females was larger in July 2016 (5.1 percentage points) compared to July 2015 (2.1 percentage points) or July 2017 (0.4 percentage points). In other words, the difference in average pass rates between males and females increased immediately after UBE adoption before shrinking the following July to roughly one-fifth the difference in pass rates prior to UBE adoption. Pass rates in February increased dramatically for candidates included in the school-based sample and, as has been stated previously, is unlikely representative of all candidates testing in New York in February. Finally, for July, the pass rates were somewhat higher, and pass rates increased more rapidly, in the school-based sample compared to the domestic-educated NYSBLE sample (Figure 4.2.8) but the general patterns of pass rates for July across groups were similar, where pass rates increased, males tended to have higher pass rates than females, and the difference between males and females increased in July 2016 before decreasing in July 2017.

Table 4.3.4
Pass Rates
School-based Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female		27.2%	47.6%	72.0%	77.0%	84.9%
(SEM 1 to 3)	N	265	393	1037	2223	1844
Male		28.7%	40.7%	74.1%	82.1%	85.3%
(SEM 1 to 3)	N	265	329	1027	2266	1880
All*		27.9%	44.5%	73.2%	79.6%	85.1%
(SEM 1 to 2)	N	534	723	2084	4520	3753

* All includes candidates omitting their gender.

Figure 4.3.7
Pass Rates
School-based Sample: Gender
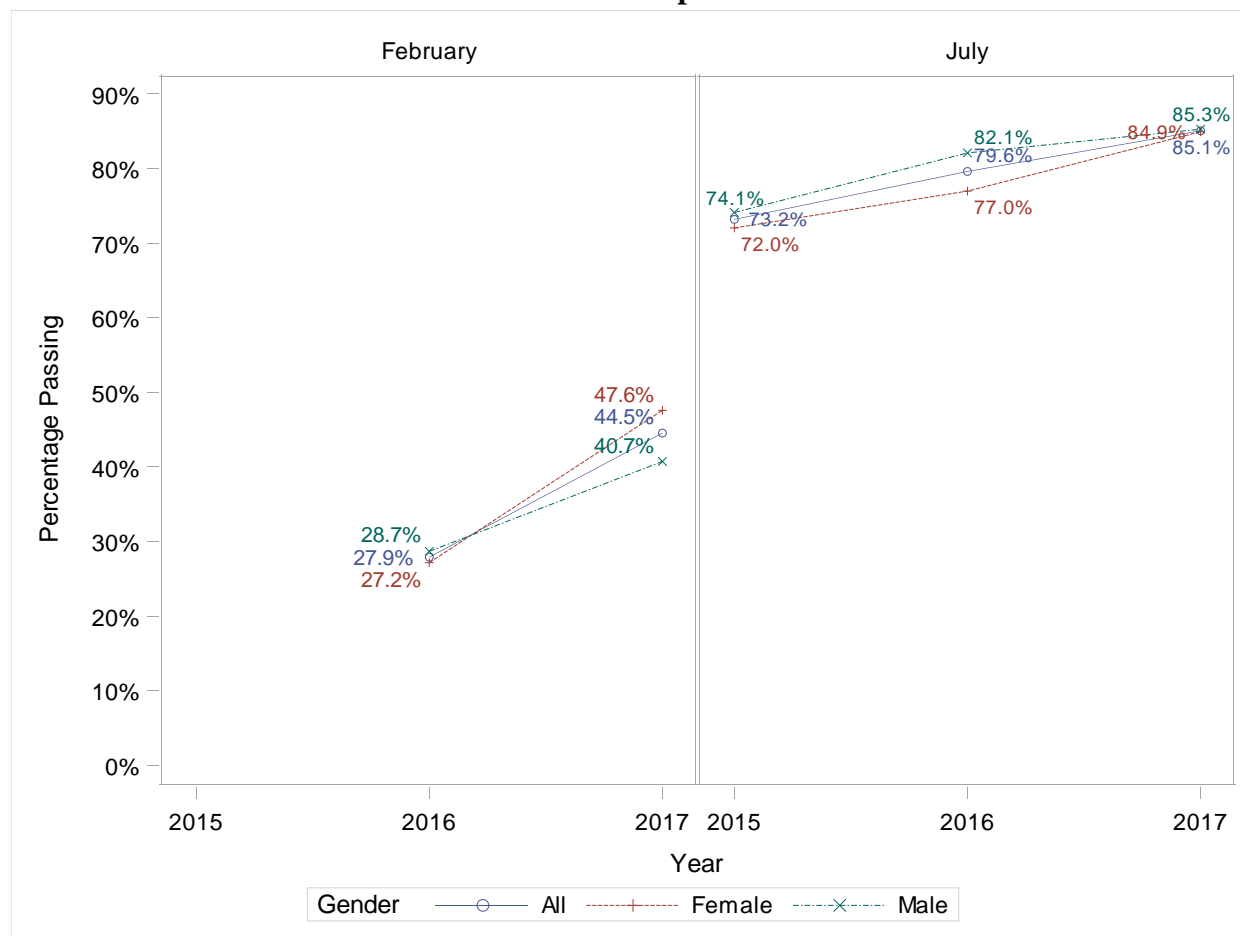
4.3.2 First-Time Takers in the School-based Sample by Gender

Table 4.3.5, Figure 4.3.8, and Figure 4.3.9 contain summaries of MBE scores by gender for first-time takers in the school-based sample. Average MBE scores increased across February and across July exams for both groups. Across Julys, males had higher average MBE scores than females. The difference in average MBE scores between males and females was 4.9 points in July 2015, 5.3 points in July 2016, and 3.5 points in July 2017. Across Februarys, males had higher average MBE scores in 2016 and females had higher average MBE scores in 2017. In February 2016, average scores favored males by 1.9 points and in February 2017 average scores favored females by 1.5 points.

A particular challenge with the first-time takers in the school-based sample in February was that the sample sizes were relatively small (between 37 and 48 for females and males), which led to less stable means compared to other samples. In addition, we need to be cautious not to over-interpret the performance of domestic-educated first-time takers in February where school-based sample results are probably not representative of the NYSBLE sample. For example, if we compare Figure 4.3.9 and Figure 4.2.16, we can see that in February there are substantially different average MBE scores for the first-time taker school-based sample compared to the first-time taker NYSBLE sample. However, July results did not appear to differ as much, so that the school-based sample appeared to better represent the NYSBLE sample in July.

Table 4.3.5
MBE Score Means and Standard Deviations
First-Time Taker School-based Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	122.70	128.89	142.11	144.35	148.49
(SEM 0.3 to 2.1)	(SD)	(9.14)	(13.98)	(15.70)	(15.10)	(14.74)
	N	37	44	925	2004	1678
Male	Mean	124.56	127.41	146.99	149.69	151.96
(SEM 0.3 to 2.0)	(SD)	(10.48)	(14.19)	(15.54)	(14.77)	(14.84)
	N	47	48	929	2038	1700
All*	Mean	123.58	128.12	144.58	147.06	150.23
(SEM 0.2 to 1.5)	(SD)	(9.94)	(14.03)	(15.78)	(15.15)	(14.89)
	N	85	92	1873	4070	3405

* All includes candidates omitting their gender.

Figure 4.3.8
Boxplots of MBE Scores
First-Time Taker School-based Sample: Gender

Figure 4.3.9
Means of MBE Scores
First-Time Taker School-based Sample: Gender
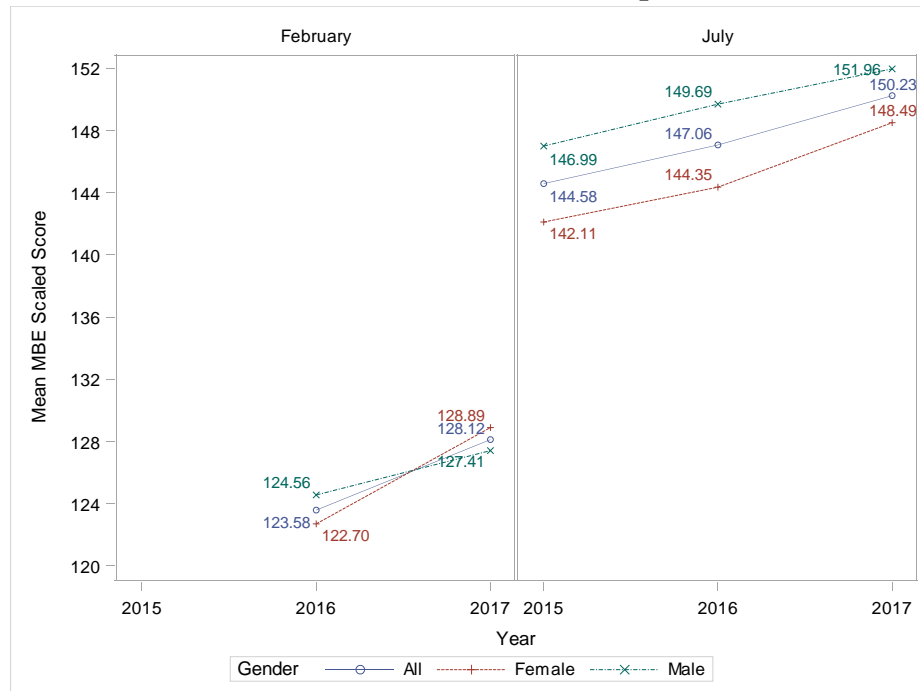
Table 4.3.6, Figure 4.3.10, and Figure 4.3.11 contain written scores for first-time takers in the school-based sample. Average written scores were higher for females compared to males at all bar exams (by between 1.2 and 1.6 points higher) except for July 2016, where average scores were higher for males than females (by 0.5 points). In addition, average scores increased across February and across July exams. Increases in means were particularly large across Februarys, although, as stated earlier, the first-time taker school-based sample February group was unlikely to be representative of the domestic-educated first-time taker NYSBLE sample.

Table 4.3.6
Written Score Means and Standard Deviations
First-Time Taker School-based Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	121.74	129.89	145.30	147.29	151.88
(SEM 0.3 to 2.0)	(SD)	(10.51)	(13.27)	(15.63)	(15.47)	(15.44)
	N	37	44	925	2004	1678
Male	Mean	120.13	128.66	143.62	147.79	150.28
(SEM 0.3 to 1.9)	(SD)	(10.34)	(13.29)	(15.82)	(15.33)	(15.34)
	N	47	48	929	2038	1700
All*	Mean	120.59	129.25	144.46	147.56	151.06
(SEM 0.2 to 1.4)	(SD)	(10.58)	(13.22)	(15.73)	(15.39)	(15.42)
	N	85	92	1873	4070	3405

* All includes candidates omitting their gender.

Figure 4.3.10
Boxplots of Written Scores
First-Time Taker School-based Sample: Gender

Figure 4.3.11
Means of Written Scores
First-Time Taker School-based Sample: Gender

Summaries of bar exam scores by gender for the first-time taker school-based sample are included in Table 4.3.7, Figure 4.3.12, and Figure 4.3.13. On average, females scored higher than males in February and males scored higher than females in July. Average scores increased across Februarys and across Julys for both groups. Similar to the NYSBLE sample in section 4.2, the difference in average bar exam scores between males and females was larger in July 2016 (5.9 points) compared to July 2015 (2.7 points) or July 2017 (1.9 points). The difference in average bar exam scores between males and females increased immediately after UBE adoption before shrinking the following July.

Compared to the domestic-educated first-time taker NYSBLE sample (Figure 4.2.20), average bar exam scores for the first-time taker school-based sample in February were quite different, with averages lower for the school-based sample yet increasing dramatically across 2016 and 2017. This, again, indicated that the school-based sample was unlikely representative of the domestic-educated first-time taker NYSBLE sample in February. For July, average scores were somewhat higher for the school-based sample, but the patterns of performance were similar to the domestic-educated first-time takers in the NYSBLE sample, so that the July school-based sample may be a reasonable representation the patterns of performance on the bar exam across July exams by gender.

Table 4.3.7
Bar Exam Score Means and Standard Deviations
First-Time Taker School-based Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female	Mean	245.36	258.84	287.37	291.69	300.43
(SEM 0.6 to 3.7)	(SD)	(14.80)	(24.82)	(28.58)	(28.11)	(27.87)
	N	37	44	925	2004	1678
Male	Mean	245.05	256.17	290.03	297.54	302.28
(SEM 0.6 to 3.6)	(SD)	(16.69)	(24.85)	(28.74)	(27.65)	(27.85)
	N	47	48	929	2038	1700
All*	Mean	244.76	257.45	288.71	294.67	301.34
(SEM 0.4 to 2.6)	(SD)	(16.18)	(24.74)	(28.65)	(28.00)	(27.89)
	N	85	92	1873	4070	3405

* All includes candidates omitting their gender.

Figure 4.3.12
Boxplots of Bar Exam Scores
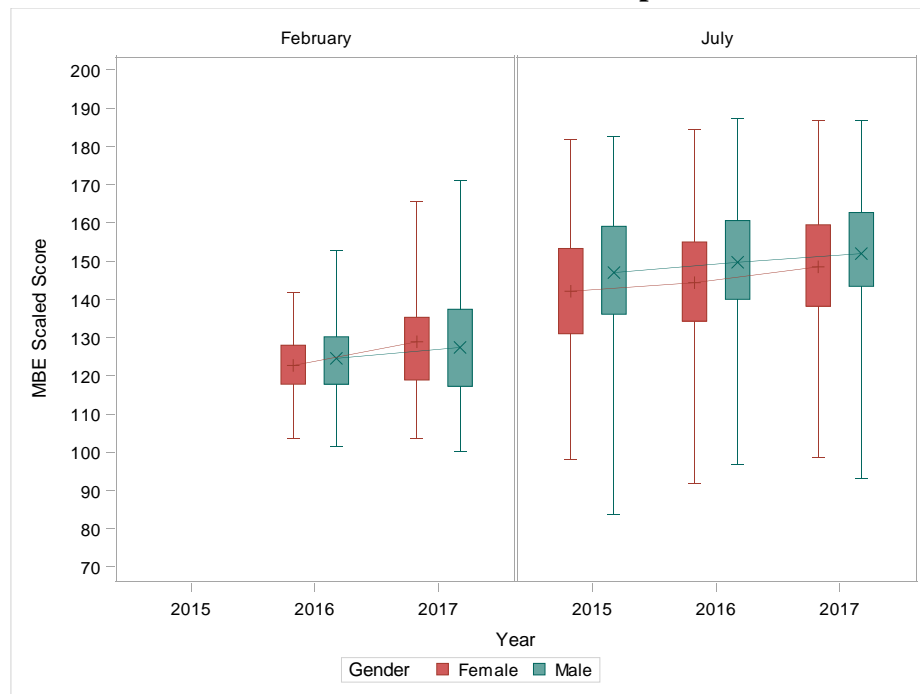**First-Time Taker School-based Sample: Gender**
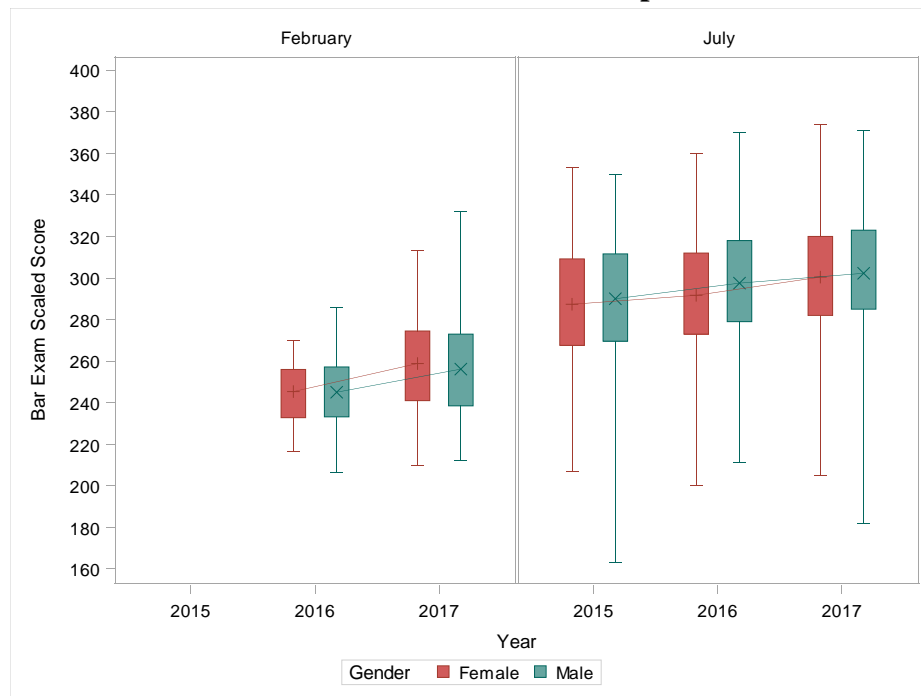
Figure 4.3.13
Means of Bar Exam Scores
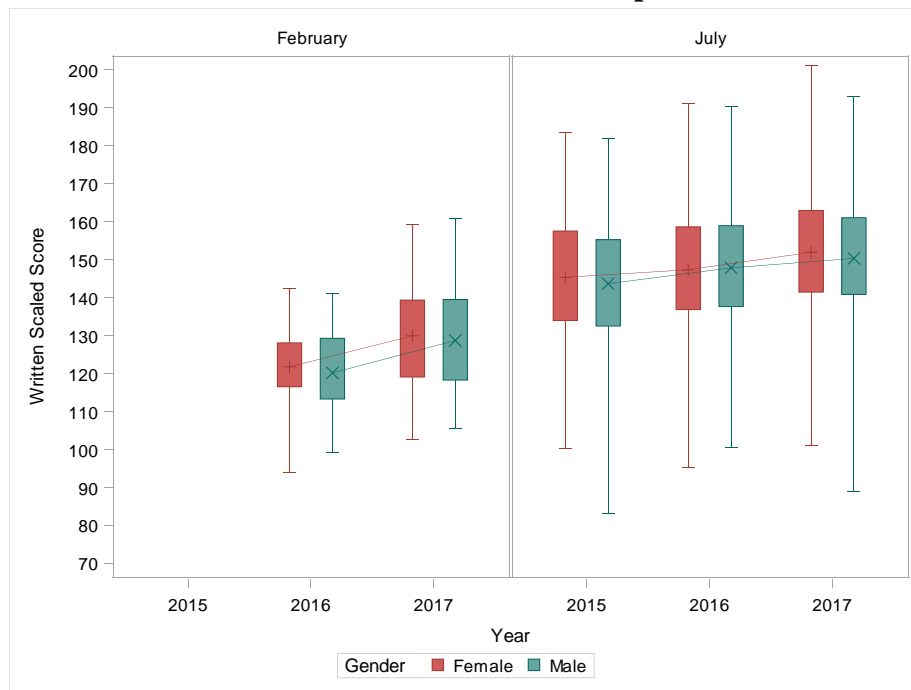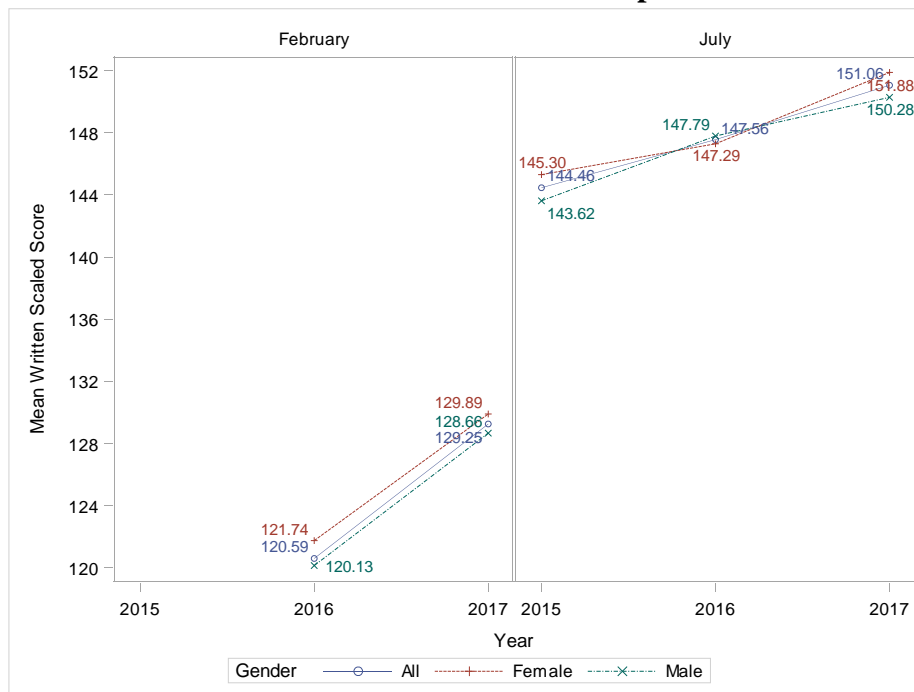**First-Time Taker School-based Sample: Gender**
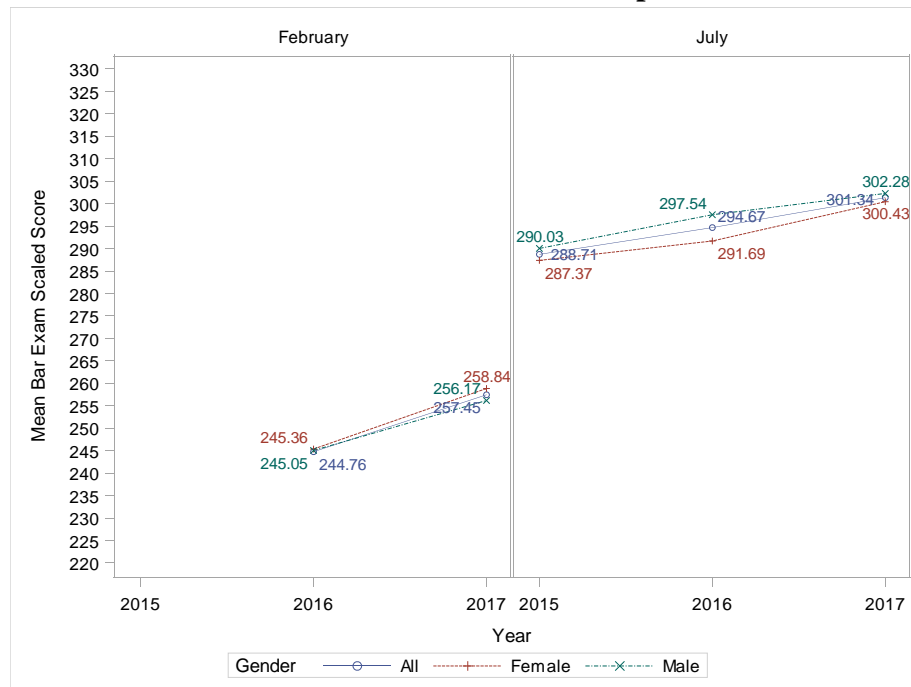
Table 4.3.8 and Figure 4.3.14 contain pass rates by gender for the first-time taker school-based sample. The evidence that the first-time taker school-based sample may not well represent all domestic-educated candidates is particularly obvious given the very low pass rates (less than 5%) observed for the February 2016 first-time takers in the sample, although the February 2017 pass rate was also lower than the entire school-based sample (e.g., Figure 4.3.7) and domestic-educated first-time takers in the NYSBLE sample (e.g., Figure 4.2.21). The relatively low pass rates are consistent with the low average bar exam scores observed for the February groups, which fell well below the passing score of 266.[51] For the July exams, pass rates increased between 2015 and 2017 and male pass rates were higher than female pass rates. In addition, the difference in pass rates increased in July 2016 (to 5.7 percentage points) compared to July 2015 (2.9 percentage points) before decreasing in July 2017 (to 1.5 percentage points). The patterns of pass rates for the July first-time takers in the school-based sample were similar to pass rates for domestic-educated first-time takers (Figure 4.2.21), even though the school-based sample pass rates were higher in July 2016 and July 2017.

Table 4.3.8
Pass Rates
First-Time Taker School-based Sample: Gender

		February 2016	February 2017	July 2015	July 2016	July 2017
Female		2.7%	29.5%	76.8%	81.8%	89.3%
(SEM 1 to 7)	N	37	44	925	2004	1678
Male		4.3%	31.3%	79.7%	87.5%	90.8%
(SEM 1 to 7)	N	47	48	929	2038	1700
All*		3.5%	30.4%	78.3%	84.8%	90.0%
(SEM 1 to 5)	N	85	92	1873	4070	3405

* All includes candidates omitting their gender.

[51] The first-time takers in the school-based sample in February 2016 and February 2017 were an unusual group. The average bar exam scores and pass rates for February first-time takers in the school-based sample were lower than the entire school-based sample, which included first-time takers and repeaters. Generally, first-time takers score higher, on average, than repeaters. That they didn't here is most likely due to the February first-time taker sample not being representative of all domestic-educated first-time takers because in the domestic-educated NYSBLE sample, first-time takers had higher average bar exam scores and higher pass rates than all takers (e.g., compare Figures 4.2.6 and 4.2.7 to Figures 4.2.20 and 4.2.21). This is further evidence to be cautious when interpreting the results of the February school-based sample as representative of all domestic-educated candidates taking the New York bar exam.

Figure 4.3.14
Pass Rates
First-Time Taker School-based Sample: Gender
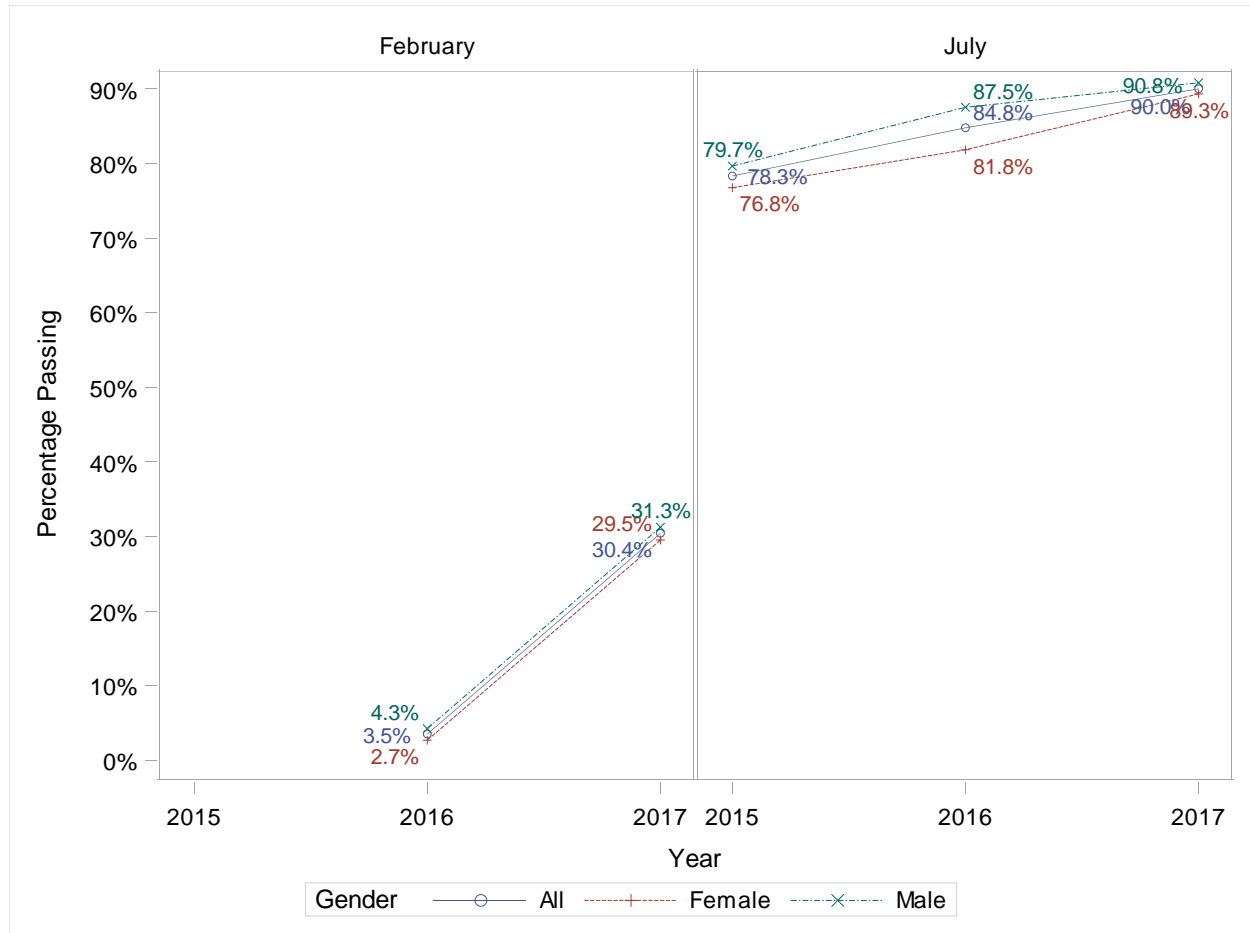
4.3.3 School-based Sample by Race/Ethnicity

Table 4.3.9 provides means and standard deviations of MBE scores for the school-based sample by race/ethnicity.[52] Average MBE scores differed by racial/ethnic group. The pattern of averages in July was consistent across years, with the Caucasian/White group having the highest average score, followed by the Asian/Pacific Islander group, Hispanic/Latino group, and Black/African American group (Figure 4.3.15 and Figure 4.3.16). In February, the average differences between groups were smaller and less consistent, with the Caucasian/White or Hispanic/Latino group having the highest average score, followed by the Asian/Pacific Islander group, and then the Black/African American group. Scores increased across February bar exams and across July bar exams for each group, although the increases in February were more modest than July for the candidates included in the school-based sample.

In February, average MBE scores increased by 3.5 points for the Hispanic/Latino group, 3.4 points for the Asian/Pacific Islander group, 1.9 points for the Black/African American group, and 0.2 points for the Caucasian/White group. Between July 2015 and July 2017, average MBE scores increased by roughly 8.1 points for the Asian/Pacific Islander group, 6.1 points for the Hispanic/Latino group, 6 points for the Black/African American group, and 5 points for the Caucasian/White group. So, while the Caucasian/White group scored higher, on average, the remaining groups had larger increases in average MBE scores. The Hispanic/Latino average scores leveled off between July 2016 and July 2017, increasing less than other groups, and the Black/African American average scores increased slightly between July 2015 and July 2016, less than other groups, and then increased more than other groups between July 2016 and July 2017. Similar to the earlier analysis of gender, the patterns of average MBE performance across racial/ethnic groups in the school-based sample were different in February than the patterns for the domestic-educated NYSBLE group. Average scores were higher for the NYSBLE sample but July patterns of performance tended to be similar, except for the Black/African American group where average MBE score steadily increased between July 2015 and July 2017 for the domestic-educated NYSBLE sample (e.g., Figure 4.2.31) but increased more slowly between July 2015 and July 2016 for the school-based sample before increasing more quickly between July 2016 and July 2017 (Figure 4.3.16).

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[52] As mentioned at the beginning of this section, Puerto Rican, Chicano/Mexican American, and American Indian/Alaskan Native, Other, and Omitted groups were excluded as separate groupings. The results for these groups are provided for reference purposes in Appendix N for groups with 10 or more candidates. Extreme caution is required in interpreting results with few candidates.

Table 4.3.9
MBE Score Means and Standard Deviations
School-based Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	129.92	130.08	145.68	147.77	150.66
(SEM 0.3 to 0.7)	(SD)	(11.13)	(11.47)	(15.89)	(15.61)	(15.55)
	N	264	347	1407	2953	2388
Asian/Pacific Islander	Mean	126.62	130.02	138.27	143.02	146.38
(SEM 0.6 to 1.3)	(SD)	(11.73)	(11.56)	(15.76)	(14.88)	(15.81)
	N	85	110	235	575	538
Black/African American	Mean	126.34	128.22	133.06	133.93	139.09
(SEM 0.8 to 1.2)	(SD)	(11.26)	(11.25)	(14.28)	(14.61)	(15.16)
	N	84	141	182	374	307
Hispanic/Latino	Mean	129.04	132.58	135.19	140.13	141.24
(SEM 0.9 to 1.8)	(SD)	(12.17)	(11.80)	(15.97)	(14.78)	(14.58)
	N	44	66	104	266	214
All*	Mean	128.45	129.95	142.75	145.10	148.19
(SEM 0.2 to 0.5)	(SD)	(11.19)	(11.43)	(16.30)	(15.96)	(15.97)
	N	534	723	2084	4520	3753

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.3.15
Boxplots of MBE Scores
School-based Sample: Race/Ethnicity

Figure 4.3.16
Means of MBE Scores
School-based Sample: Race/Ethnicity
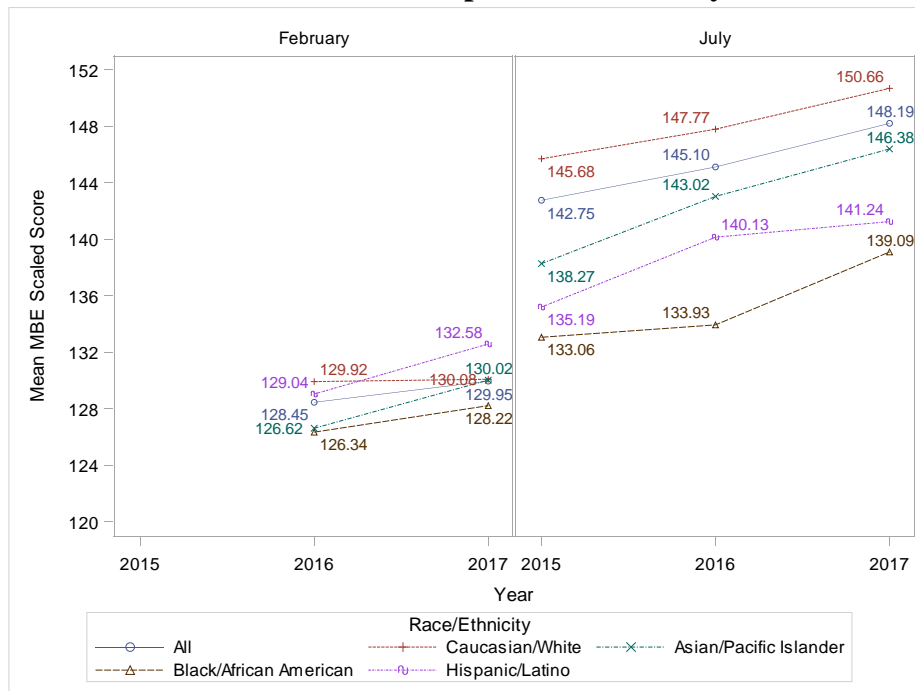
Table 4.3.10, Figure 4.3.17, and Figure 4.3.18 contain summaries of written scores by gender for the school-based sample. Similar to MBE scores, average written scores tended to differ by racial/ethnic group. The school-based sample means generally increased across Februarys and across Julys, with the exception of the Black/African American group, which had an average written score in July 2016 that was lower (133.35) than July 2015 (134.13) before increasing in July 2017 (138.49). Between July 2015 and July 2017, average written scores increased 10.3 points for the Asian/Pacific Islander group, 6.7 points for the Hispanic/Latino group, 5.9 points for the Caucasian/White group, and 4.4 points for the Black/African American group. For July exams, average written scores for the school-based sample were higher than average scores for the domestic-educated NYSBLE sample (Figure 4.3.18 versus Figure 4.2.33), but the general pattern of performance was similar, including the dip in scores for the Black/African American group in July 2016 before increasing in July 2017.

Table 4.3.10
Written Score Means and Standard Deviations
School-based Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	128.92	131.36	145.52	148.29	151.37
(SEM 0.3 to 0.7)	(SD)	(12.14)	(12.65)	(15.67)	(15.71)	(15.82)
	N	264	347	1407	2953	2388
Asian/Pacific Islander	Mean	127.47	134.54	138.31	144.77	148.59
(SEM 0.6 to 1.3)	(SD)	(11.72)	(10.94)	(16.19)	(15.49)	(16.27)
	N	85	110	235	575	538
Black/African American	Mean	127.59	128.95	134.13	133.35	138.49
(SEM 0.8 to 1.4)	(SD)	(12.80)	(11.67)	(15.16)	(14.56)	(15.84)
	N	84	141	182	374	307
Hispanic/Latino	Mean	128.60	131.20	135.92	139.60	142.65
(SEM 0.9 to 2.0)	(SD)	(13.47)	(11.53)	(15.40)	(14.70)	(15.65)
	N	44	66	104	266	214
All*	Mean	128.19	131.43	142.73	145.65	149.05
(SEM 0.2 to 0.5)	(SD)	(12.13)	(12.23)	(16.25)	(16.14)	(16.40)
	N	534	723	2084	4520	3753

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.3.17
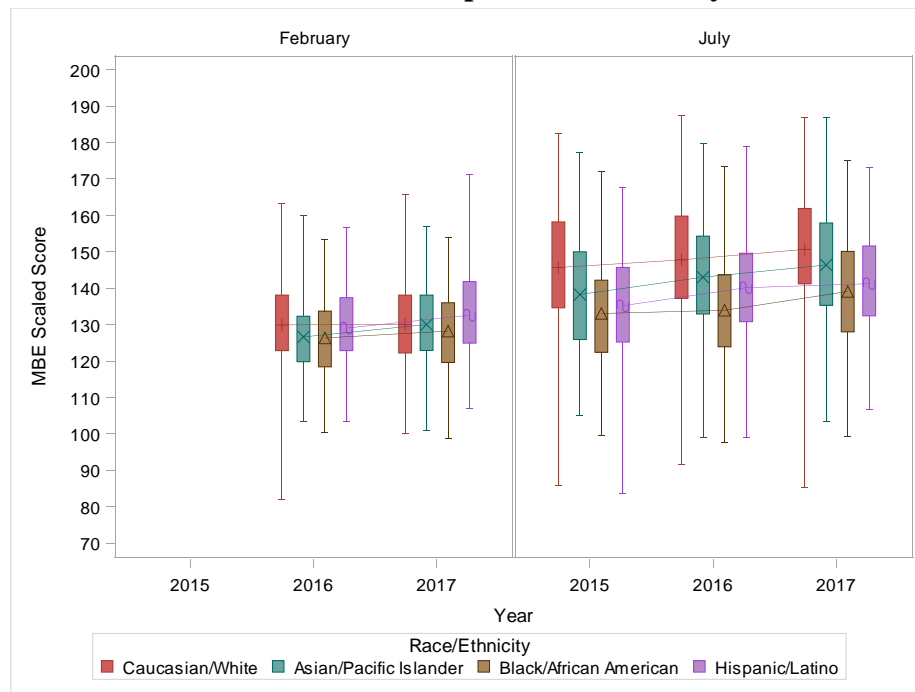**Boxplots of Written Scores**
School-based Sample: Race/Ethnicity
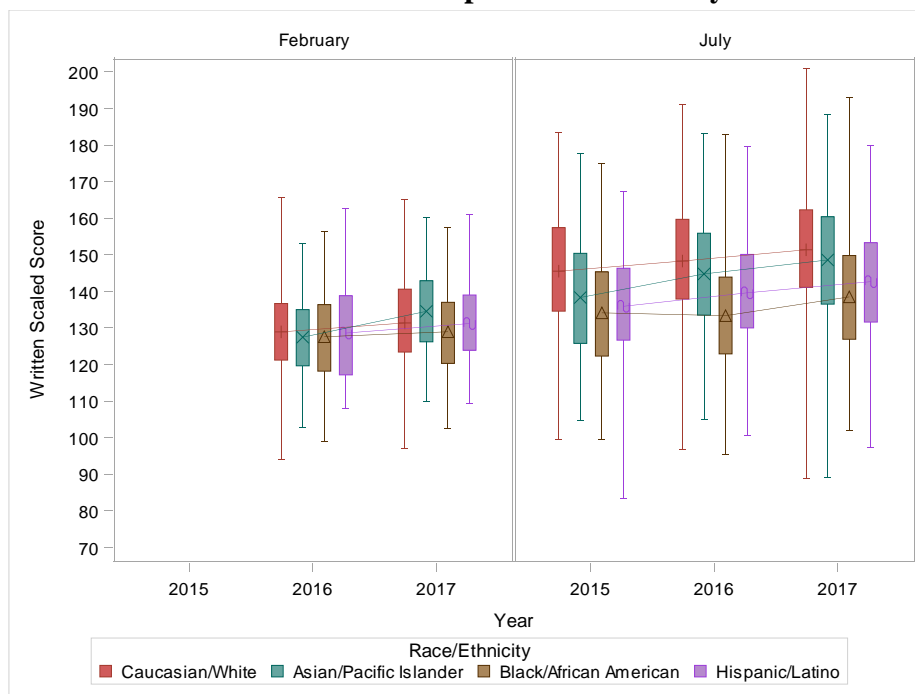
Figure 4.3.18
Means of Written Scores
School-based Sample: Race/Ethnicity
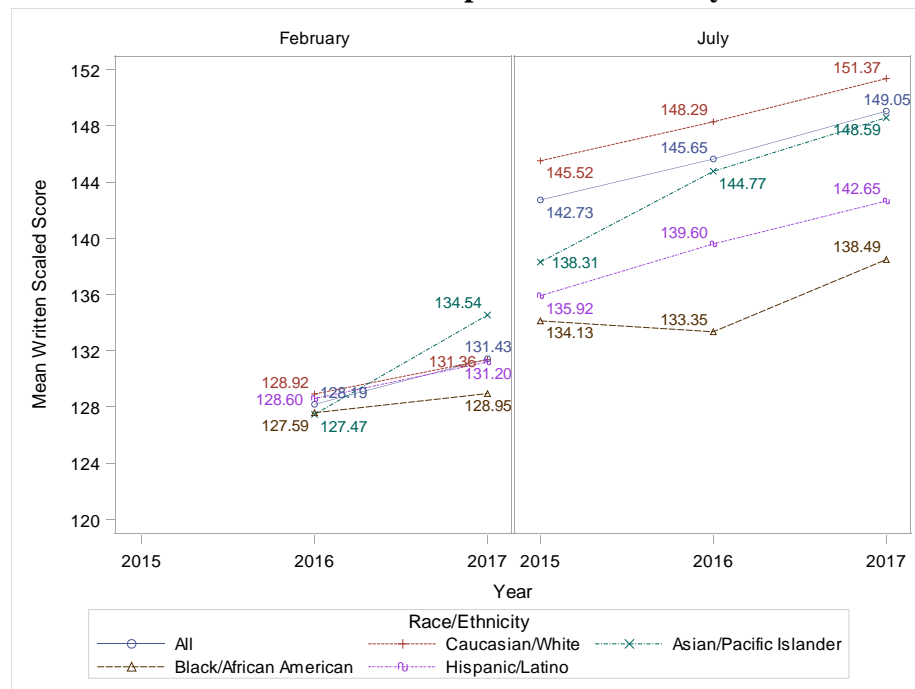
Summaries for bar exam scores for the school-based sample by race/ethnicity are provided in Table 4.3.11, Figure 4.3.19, and Figure 4.3.20. Average scores increased across Februarys and across Julys. In July, the Caucasian/White group scored highest, on average, followed by the Asian/Pacific Islander group, Hispanic/Latino group, and Black/African American group. Average scores increased at each July exam and between July 2015 and July 2017 scores increased 18.5 points for the Asian/Pacific Islander group, 13 points for the Hispanic/Latino group, 11.2 points for the Caucasian/White group, and 10.3 points for the Black/African American group. However, between July 2015 and July 2016, average bar exam scores increased modestly (0.02) for the Black/African American group compared to other groups. In the domestic-educated NYSBLE sample (Figure 4.2.35), the Black/African American group had average bar exam scores increase by almost a point between July 2015 and July 2016. Otherwise, despite slightly higher average bar exam scores for the school-based sample, the general patterns of average bar exam performance appeared similar across the school-based sample and domestic-educated candidates in the NYSBLE sample for July bar exams.

If we compare the average bar exam scores for the school-based sample to the average performance on background characteristics for the school-based sample in section 3.4 (UGPA, LSAT score, LGPA) we can see that there were also differences in background characteristics across groups and that performance had a tendency to increase across years. The patterns of differences did not always correspond perfectly to the differences observed across groups on bar exam scores (e.g., average UGPAs and LSAT scores dipped somewhat for the Caucasian/White group between July 2015 and July 2016), but the fact that (a) there were differences among groups and (b) performance on background characteristics was related to performance on the bar exam, indicates that background characteristics explain at least part of the differences observed between groups before and after UBE adoption. In section 7 (and Appendix O), we used statistical models to explore this issue further, specifically to statistically account for background characteristics when studying bar exam performance by groups.

Table 4.3.11
Bar Exam Score Means and Standard Deviations
School-based Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean	258.69	261.50	290.85	296.12	302.08
(SEM 0.5 to 1.2)	(SD)	(19.11)	(20.37)	(28.61)	(28.73)	(29.00)
	N	264	347	1407	2953	2388
Asian/Pacific Islander	Mean	253.86	264.61	276.48	287.83	295.02
(SEM 1.2 to 2.1)	(SD)	(19.76)	(17.34)	(29.02)	(28.02)	(29.67)
	N	85	110	235	575	538
Black/African American	Mean	254.19	257.23	267.30	267.32	277.64
(SEM 1.4 to 2.2)	(SD)	(20.08)	(19.02)	(26.89)	(26.39)	(28.83)
	N	84	141	182	374	307
Hispanic/Latino	Mean	257.20	263.86	270.89	279.78	283.93
(SEM 1.7 to 3.1)	(SD)	(20.60)	(19.49)	(28.81)	(26.97)	(28.10)
	N	44	66	104	266	214
All*	Mean	256.56	261.43	285.19	290.80	297.29
(SEM 0.4 to 0.8)	(SD)	(19.35)	(19.71)	(29.75)	(29.68)	(30.10)
	N	534	723	2084	4520	3753

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.3.19
Boxplots of Bar Exam Scores
School-based Sample: Race/Ethnicity
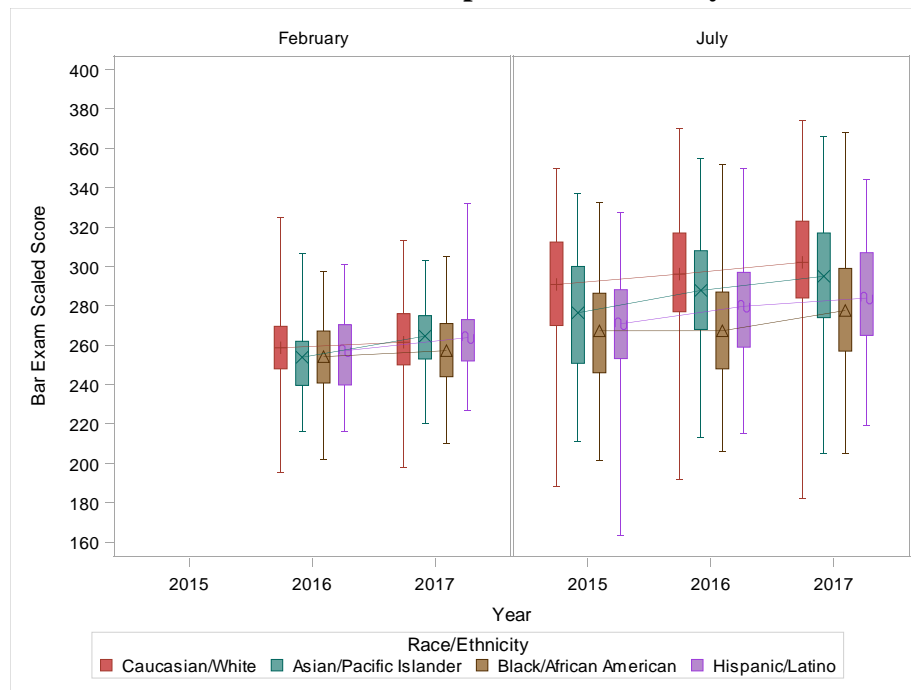
Figure 4.3.20
Means of Bar Exam Scores
School-based Sample: Race/Ethnicity
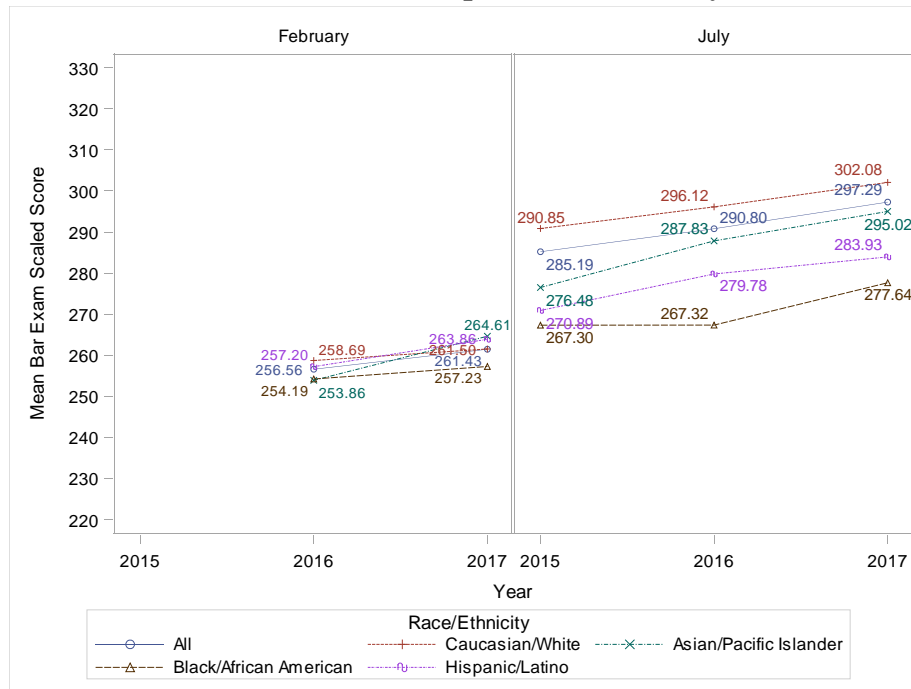
Patterns of pass rates for the school-based sample tended to be similar to the pattern of average bar exam scores, with the exception of the Black/African American group, which had pass rates decline from 52.7% in July 2015 to 52.1% in July 2016 before recovering to 68.7% in July 2017 (see Table 4.3.12 and Figure 4.3.21). A similar pattern of decline was observed for the NYSBLE sample (see Figure 4.2.36), where the distribution of bar exam scores determined how the average bar exam score increased yet the pass rate decreased. Otherwise, pass rates differed across groups, particularly in July, and pass rates increased across February exams and across July exams. If we compare July 2015 to July 2017, pass rates increased 22 percentage points for the Asian/Pacific Islander group, 17.1 percentage points for the Hispanic/Latino group, 16 percentage points for the Black/African American group, and 9.1 percentage points for the Caucasian/White group.

Table 4.3.12
Pass Rates
School-based Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White		31.8%	44.1%	79.8%	85.0%	88.9%
(SEM 1 to 3)	N	264	347	1407	2953	2388
Asian/Pacific Islander		22.4%	49.1%	61.3%	76.7%	83.3%
(SEM 2 to 5)	N	85	110	235	575	538
Black/African American		26.2%	38.3%	52.7%	52.1%	68.7%
(SEM 3 to 5)	N	84	141	182	374	307
Hispanic/Latino		31.8%	47.0%	57.7%	69.5%	74.8%
(SEM 3 to 7)	N	44	66	104	266	214
All*		27.9%	44.5%	73.2%	79.6%	85.1%
(SEM 1 to 2)	N	534	723	2084	4520	3753

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.3.21
**Pass Rates**
School-based Sample: Race/Ethnicity
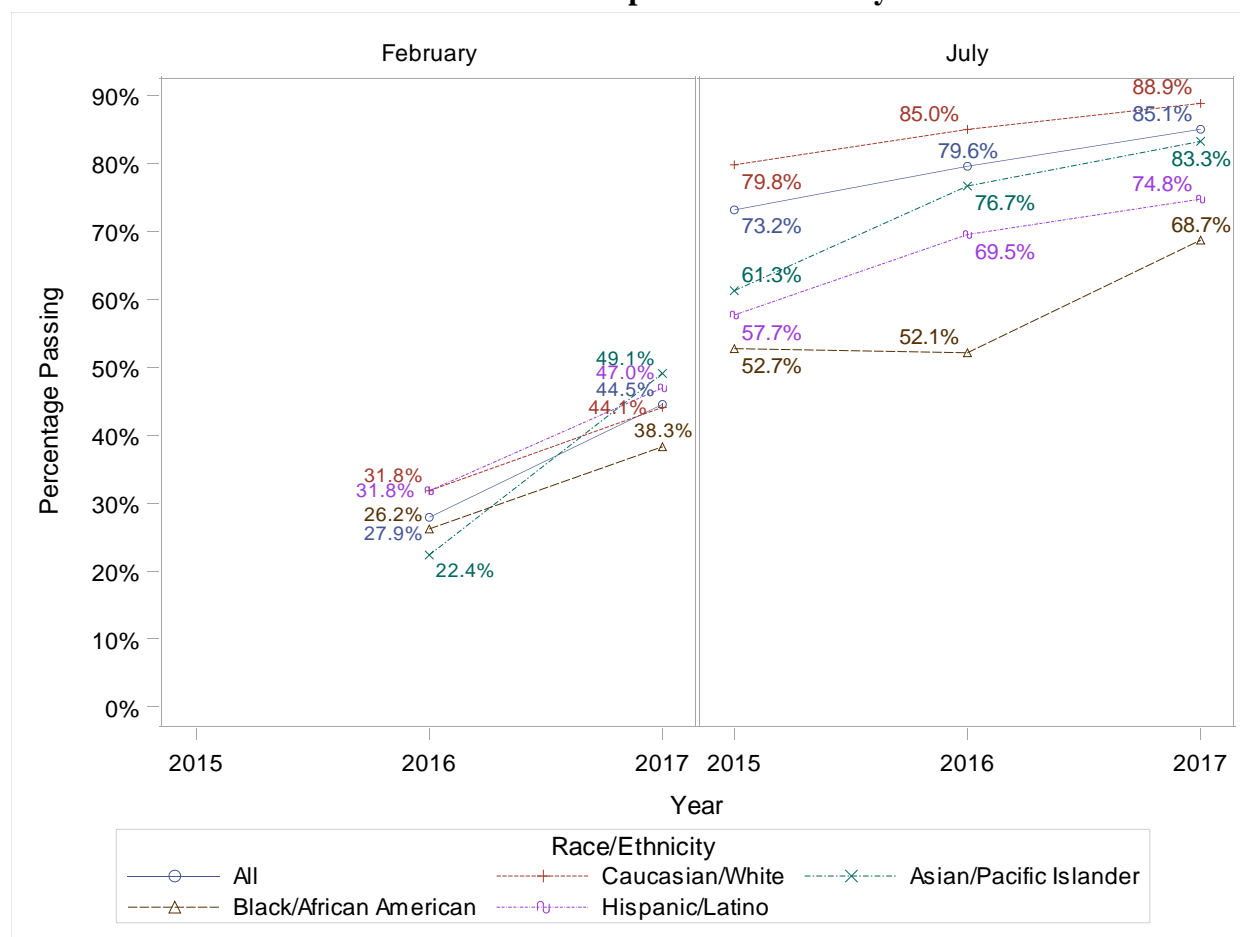
4.3.4 First-Time Takers in the School-based Sample by Race/Ethnicity

Table 4.3.13 provides means and standard deviations of MBE scores for the school-based sample by race/ethnicity. Because the sample sizes for first-time takers by racial/ethnic group dipped particularly low (between 6 and 58 candidates), we did not include the results for February broken down by racial/ethnic groups. Results are not generally interpretable with small sample sizes because statistics like means and standard deviations become unstable. In addition, as we have mentioned throughout the analysis of the school-based sample, the February results did not appear to be particularly representative of the domestic-educated candidates taking the New York bar exam, especially for first-time takers, which limited the extent to which the results

of the school-based sample for the February candidates were indicative of performance of all domestic-educated first-time takers in New York.[53]

Average MBE scores differed by racial/ethnic group. The pattern of averages across July exams by group was consistent, with the Caucasian/White group having the highest average score, followed by the Asian/Pacific Islander group, Hispanic/Latino group, and Black/African American group (Figure 4.3.22 and Figure 4.3.23; note that the February results by race/ethnicity were excluded). Scores increased across July bar exams for each group, with average MBE scores increasing by 10 points for the Asian/Pacific Islander group, 7.4 points for the Black/African American group, 6.7 points for the Hispanic/Latino group, and 4.9 points for the Caucasian/White group. So, while the Caucasian/White group scored higher, on average, the remaining groups had larger increases in average MBE scores. The Hispanic/Latino average scores leveled off between July 2016 and July 2017, increasing less than other groups, and the Black/African American average scores increased less than other groups between July 2015 and July 2016 and then increased more than other groups between July 2016 and July 2017.

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[53] Despite this limitation, we did include the analysis of the February school-based sample in other sections to be complete and to illustrate how the February school-based sample differed from all domestic-educated candidates in New York.

Table 4.3.13
MBE Score Means and Standard Deviations
First-Time Taker School-based Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean			147.25	149.44	152.18
(SEM 0.3 to 0.4)	(SD)			(15.19)	(14.72)	(14.66)
	N			1298	2726	2228
Asian/Pacific Islander	Mean			139.54	144.88	148.82
(SEM 0.6 to 1.1)	(SD)			(15.85)	(14.24)	(14.63)
	N			212	510	477
Black/African American	Mean			135.35	136.25	142.76
(SEM 0.8 to 1.2)	(SD)			(14.10)	(14.37)	(13.94)
	N			146	299	240
Hispanic/Latino	Mean			136.88	141.87	143.60
(SEM 0.9 to 1.8)	(SD)			(16.63)	(14.30)	(13.70)
	N			83	235	182
All*	Mean	123.58	128.12	144.58	147.06	150.23
(SEM 0.2 to 0.4)	(SD)	(9.94)	(14.03)	(15.78)	(15.15)	(14.89)
	N	85	92	1873	4070	3405

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.3.22
Boxplots of MBE Scores
First-Time Taker School-based Sample: Race/Ethnicity

Figure 4.3.23
Means of MBE Scores
First-Time Taker School-based Sample: Race/Ethnicity

Table 4.3.14, Figure 4.3.24, and Figure 4.3.25 contain summaries of written scores by race/ethnicity for first-time takers in the school-based sample. Similar to MBE scores, average written scores differed by racial/ethnic group and increased for each group between July 2015 and July 2017. The pattern of averages across July exams by group was consistent, with the Caucasian/White group having the highest average score, followed by the Asian/Pacific Islander group, Hispanic/Latino group, and Black/African American group. Between July 2015 and July 2017, average written scores increased 11.3 points for the Asian/Pacific Islander group, 7.4 points for the Hispanic/Latino group, 6 points for the Caucasian/White group, and 5 points for the Black/African American group. Average scores increased between July 2015 and July 2016 for all groups except the Black/African American group, which decreased by 2 points. A decrease in average written scores for the Black/African American group was also observed for the domestic-educated first-time takers in the NYSBLE sample (see Figure 4.2.40).

Table 4.3.14
Written Score Means and Standard Deviations
First-Time Taker School-based Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean			146.89	149.95	152.84
(SEM 0.3 to 0.4)	(SD)			(15.13)	(14.77)	(15.00)
	N			1298	2726	2228
Asian/Pacific Islander	Mean			139.70	146.74	151.03
(SEM 0.7 to 1.1)	(SD)			(16.25)	(14.94)	(15.09)
	N			212	510	477
Black/African American	Mean			136.90	134.92	141.88
(SEM 0.9 to 1.2)	(SD)			(14.29)	(14.74)	(15.38)
	N			146	299	240
Hispanic/Latino	Mean			137.71	140.99	145.13
(SEM 0.9 to 1.7)	(SD)			(15.75)	(14.45)	(15.04)
	N			83	235	182
All*	Mean	120.59	129.25	144.46	147.56	151.06
(SEM 0.2 to 0.4)	(SD)	(10.58)	(13.22)	(15.73)	(15.39)	(15.42)
	N	85	92	1873	4070	3405

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.3.24
Boxplots of Written Scores
First-Time Taker School-based Sample: Race/Ethnicity

Figure 4.3.25
Means of Written Scores
First-Time Taker School-based Sample: Race/Ethnicity
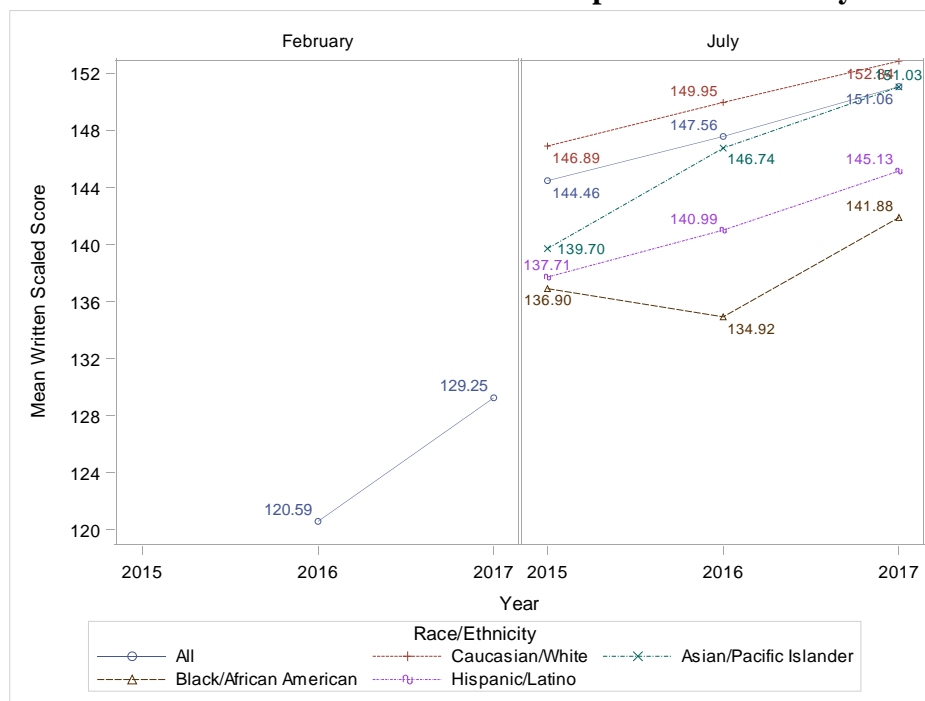
Average bar exam scores also differed across racial/ethnic groups (see Table 4.3.15, Figure 4.3.26, or Figure 4.3.27). Patterns were similar to MBE and written components: Caucasian/White, then Asian/Pacific Islander, then Hispanic/Latino, then Black/African American. Scores increased across exams for each group except for the Black/African American group, which had average bar exam scores decrease between July 2015 and July 2016 by 1.2 points. Between July 2015 and July 2017, average bar exam scores increased by 20.8 points for the Asian/Pacific Islander group, 14.3 points for the Hispanic/Latino group, 12.4 points for the Black/African American group, and 11.3 points for the Caucasian/White group. While the Caucasian/White group had higher average scores than other groups other groups had average score increases that were larger between July 2015 and July 2017.

Table 4.3.15
Bar Exam Score Means and Standard Deviations
First-Time Taker School-based Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White	Mean			293.75	299.44	305.06
(SEM 0.5 to 0.8)	(SD)			(27.30)	(26.77)	(27.16)
	N			1298	2726	2228
Asian/Pacific Islander	Mean			279.10	291.68	299.90
(SEM 1.2 to 2.0)	(SD)			(29.12)	(26.74)	(27.08)
	N			212	510	477
Black/African American	Mean			272.35	271.20	284.70
(SEM 1.5 to 2.1)	(SD)			(25.83)	(26.41)	(27.00)
	N			146	299	240
Hispanic/Latino	Mean			274.52	282.91	288.79
(SEM 1.7 to 3.3)	(SD)			(29.77)	(26.29)	(26.72)
	N			83	235	182
All*	Mean	244.76	257.45	288.71	294.67	301.34
(SEM 0.4 to 0.7)	(SD)	(16.18)	(24.74)	(28.65)	(28.00)	(27.89)
	N	85	92	1873	4070	3405

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.3.26
Boxplots of Bar Exam Scores
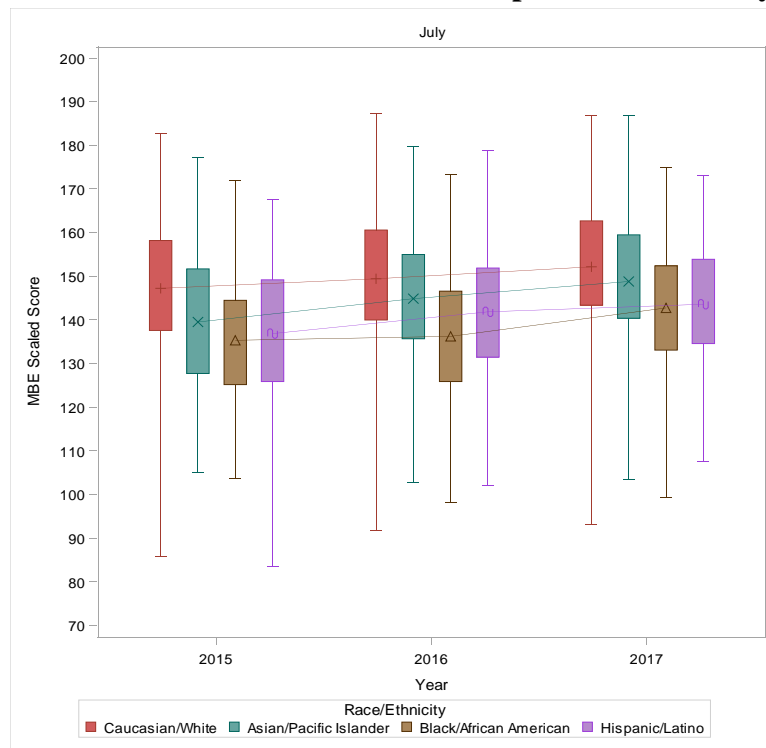**First-Time Taker School-based Sample: Race/Ethnicity**

Figure 4.3.27
Means of Bar Exam Scores
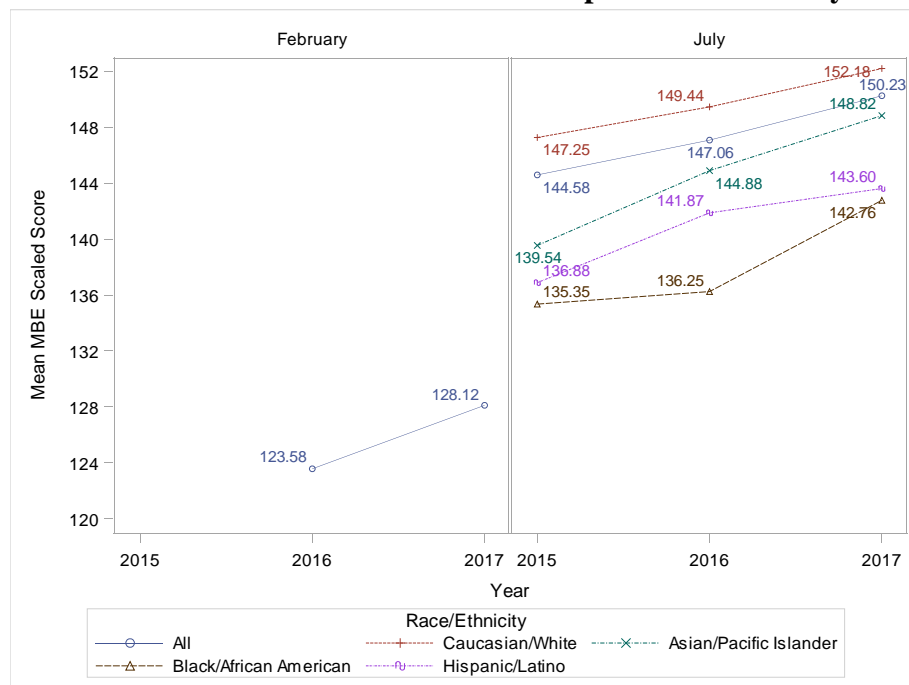**First-Time Taker School-based Sample: Race/Ethnicity**
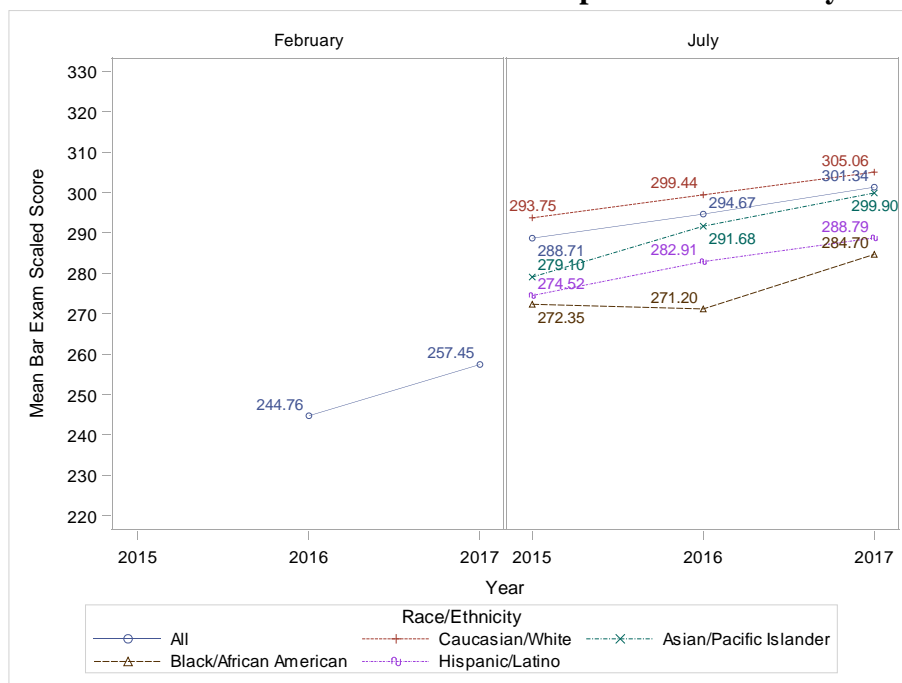
The patterns of pass rates for first-time takers in the school-based sample by race/ethnicity (Figure 4.3.28) was similar to the pattern of average scores on the bar exam (Figure 4.3.27). Pass rates differed by group and pass rates increased across exams, with the exception of the Black/African American group between July 2015 and July 2016, where pass rate decreased by 2.1 percentage points. Otherwise, between July 2015 and July 2017, pass rates increased by 23.1 percentage points for the Asian/Pacific Islander group, 20.5 percentage points for the Hispanic/Latino group, 19 percentage points for the Black/African American group, and 8.5 percentage points for the Caucasian/White group.

Table 4.3.16
Pass Rates
First-Time Taker School-based Sample: Race/Ethnicity

		February 2016	February 2017	July 2015	July 2016	July 2017
Caucasian/White				83.9%	89.2%	92.4%
(SEM = 1)	N			1298	2726	2228
Asian/Pacific Islander				66.0%	82.9%	89.1%
(SEM 1 to 3)	N			212	510	477
Black/African American				61.0%	58.9%	80.0%
(SEM 3 to 4)	N			146	299	240
Hispanic/Latino				61.4%	74.5%	81.9%
(SEM 3 to 5)	N			83	235	182
All*		3.5%	30.4%	78.3%	84.8%	90.0%
(SEM = 1)	N	85	92	1873	4070	3405

*All includes other racial/ethnic groups and those omitting racial/ethnic group.

Figure 4.3.28
Pass Rates
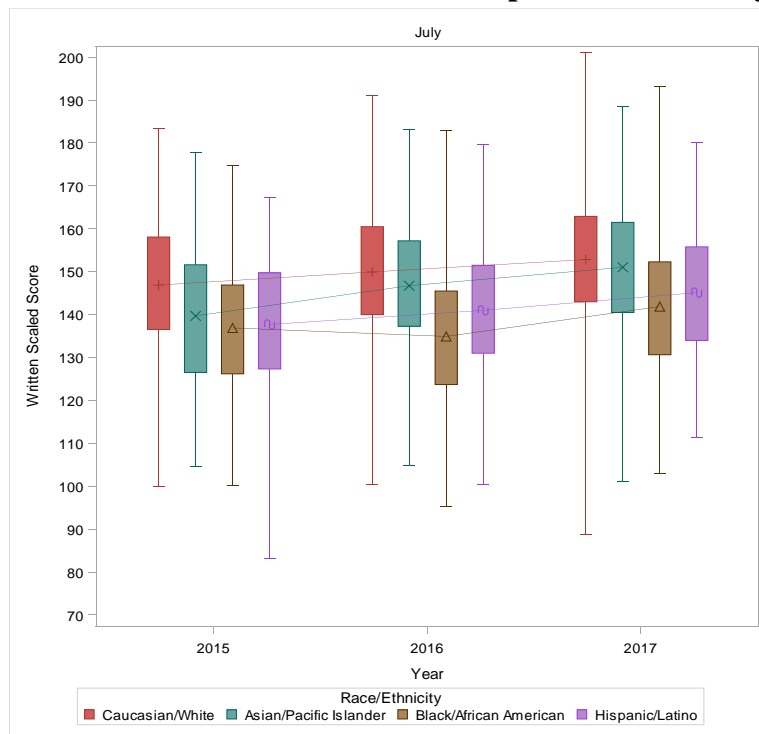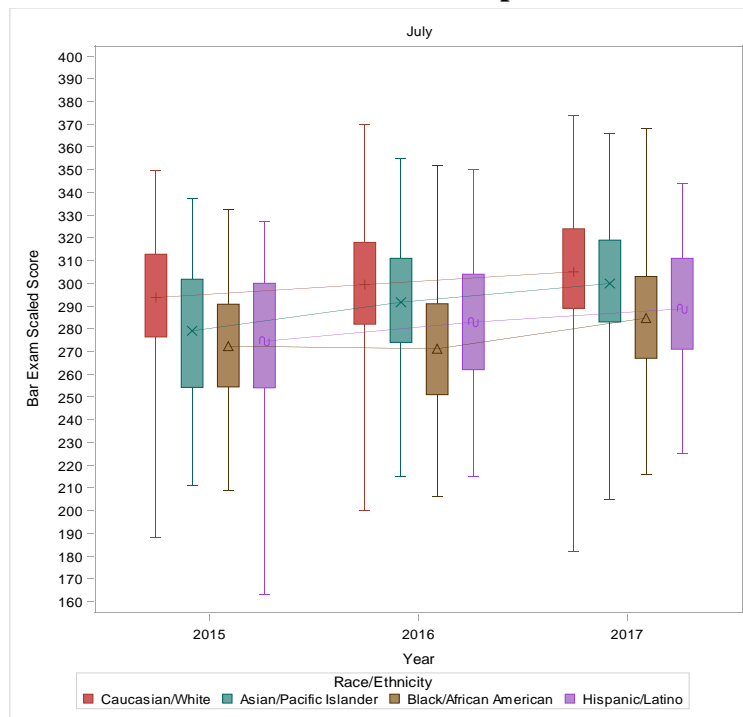**First-Time Taker School-based Sample: Race/Ethnicity**
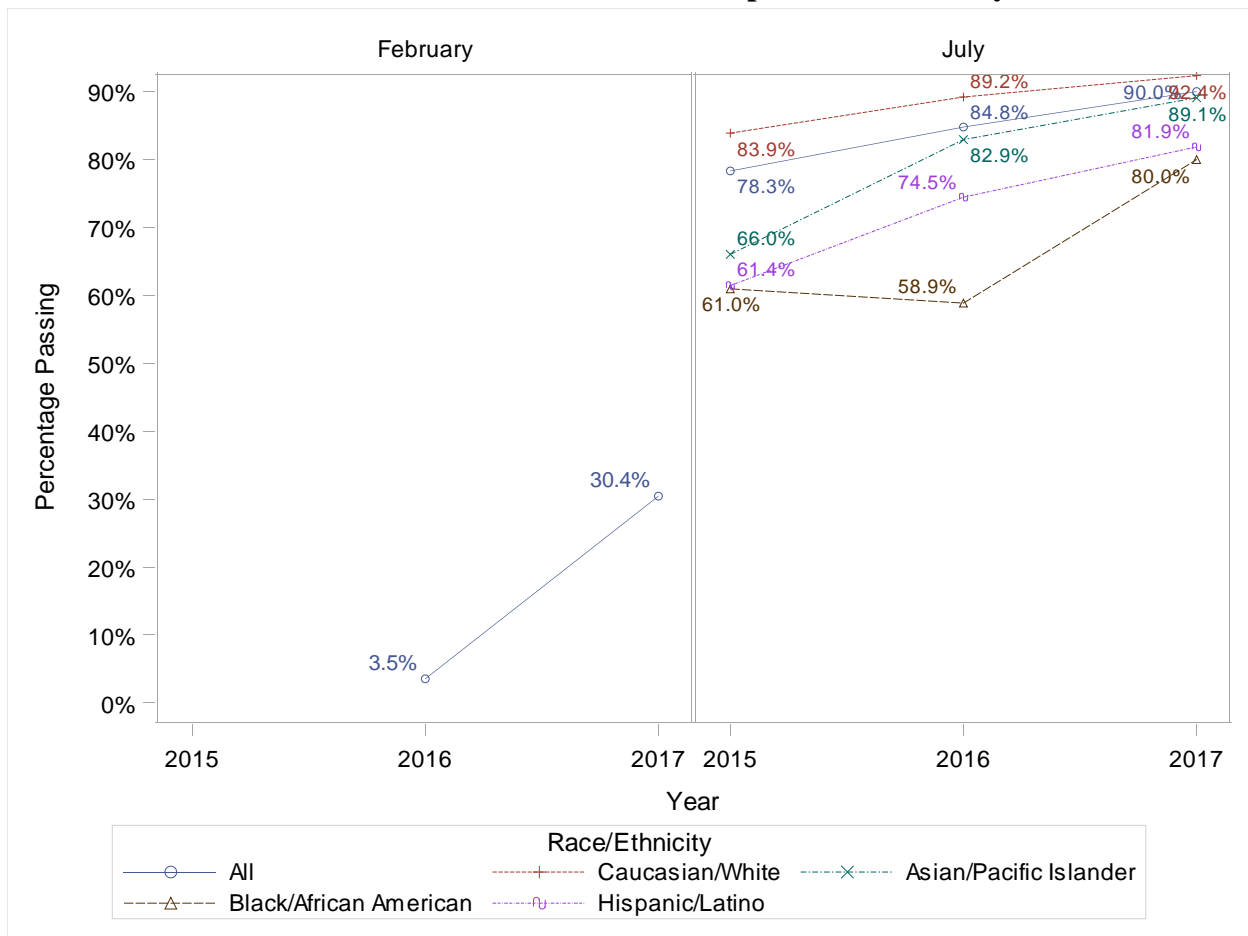
4.4 Summary

Section 4 addressed the question *how do candidates grouped by race/ethnicity and gender perform on the bar exam before and after UBE adoption?* This section explored candidate pass rates and performance on the MBE, written component, and bar exam by gender and race/ethnicity. Five groupings of candidates were studied: the NYSBLE sample, domestic-educated NYSBLE sample, domestic-educated first-time takers in the NYSBLE sample, school-based sample (which by definition included only domestic-educated candidates), and first-time takers in the school-based sample (domestic-educated). The different groupings were studied to determine how robust patterns of performance were across samples, specifically whether the school-based samples (which by definition, consisted only of a subset of domestic-educated candidates with available background characteristics) were comparable, and therefore appeared to reasonably represent, the domestic-educated (or domestic-educated first-time taker) NYSBLE sample. Across MBE, written, bar exam, and pass rates, performance was sometimes quite different across the school-based and NYSBLE samples in February, indicating that the February school-based sample did not well represent the NYSBLE sample. For July exams, the representativeness was somewhat less clear because average scores tended to be higher in the school-based sample compared to similar breakdowns in the NYSBLE sample but the patterns of scores for groups across July exams tended to be similar. In general, differences in bar exam scores supported the notion that the February school-based sample was not representative of the NYSBLE sample and, for purposes of studying patterns of performance, the July school-based sample was probably reasonably representative.

Performance tended to differ somewhat across samples for July but the patterns observed by gender and by race/ethnicity across samples tended to be similar. Of note was that domestic-educated first-time takers generally scored higher, on average, than domestic-educated candidates, which tended to score higher, on average, than the entire NYSBLE sample. This was not unexpected, but it is helpful to this summary because we can provide some general observations of patterns of performance across groups with the understanding that the specific average scores observed may differ depending on the sample being considered.

Average MBE scores, written scores, bar exam scores, and pass rates tended to differ by groups defined by gender and race/ethnicity. In addition, within each group, scores and pass rates tended to increase across February and across July, although average written scores, average bar exam scores, and pass rates for the Black/African American group had a tendency not to increase as much as other groups, or to decrease, between July 2015 and July 2016. Then, in July 2017, performance for the Black/African American group tended to increase more than other groups. This pattern of somewhat smaller increases in average performance for the Black/African American group in July 2016 compared to other groups appeared to be partially explainable using averages from background characteristics; for example, 4-point LGPA dipped somewhat in July 2016 for the Black/African American group (see Figure 3.4.10).

Even though performance generally increased after UBE adoption,[54] performance also generally increased for background characteristics, particularly across July 2015 and July 2017, so it is unlikely that the UBE explained the increase in performance. But, it is clear that performance did not systematically decrease after UBE adoption, beyond what appeared to be a temporary dip in performance for the Black/African American group and female group in July 2016. In addition, differences in performance between candidates grouped by gender or race/ethnicity did not become systematically larger after UBE adoption, especially when considering performance on the bar exam in July 2015 and the second July UBE administration in 2017 where differences in average performance between groups had a tendency to decrease. The Caucasian/White group tended to have the highest average scores on the bar exam, followed by either the Asian/Pacific Islander group or Hispanic/Latino group, and then the Black/African American group.

Several additional patterns of performance across groups are worth summarizing here. Males tended to have higher average scores on the MBE than females. Females tended to have higher average scores on the written component than males for February 2016, February 2017, and July 2017 exams, and males had tended to have slightly higher average written scores in July 2016. These patterns resulted in males having higher average bar exam scores than females. The difference in average bar exam scores between males and females widened somewhat in July 2016 at the first UBE administration but decreased in July 2017. Similar patterns were observed for pass rates: males tended to have higher pass rates than females, and in July 2016 the difference widened somewhat before decreasing in July 2017.

The differences in average performance across groups were generally consistent with other research that has been conducted on the bar exam in New York and elsewhere, although past research has found larger differences between females and males on the written component, with females scoring higher than males. Recall that racial/ethnic group differences were also observed in background characteristics in section 3 and that performance had a tendency to remain flat or increase, particularly across July exams. While the patterns of performance on background characteristics did not always perfectly correspond to the patterns of performance on the bar exam, the background characteristic performance indicated that it would be reasonable to see differences in bar exam performance across gender or racial/ethnic groups because (a) there were differences between groups on UGPA, LSAT score, and LGPA and (b) as background characteristics increased, bar exam performance increased. For example, in section 3, males tended to have higher Index-based LGPAs than females and the Caucasian/White or Asian/Pacific Islander group tended to have the highest Index-based LGPAs, followed by the Hispanic/Latino group, and Black/African American group.

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[54] The Hispanic/Latino group did have average bar exam scores decline somewhat for February domestic-educated first time takers in the NYSBLE sample (see Table 4.2.42), although the drop was small.

Differences were observed in average performance and pass rates on the bar exam across groups. Given that differences were also observed in average UGPAs, LSAT scores, and LGPAs (see section 3), candidate background characteristics likely explained at least part of the differences observed in performance and pass rates on the bar exam. However, as mentioned in section 3, even though it appeared that group differences, as defined by gender and race/ethnicity, existed on the bar exam and in background characteristics, the data available for this study does not provide clear explanations for why these differences exist, only that they do. As mentioned in section 3, candidate background characteristics provide an indication of prior performance, and average differences across groups could, for example, be due to a tendency for groups to have differences in education, social, economic, or other experiences. However, differences in averages across groups should not be interpreted as saying much about a particular individual or an individual's experience. The range of performance and experiences represented within a group is larger than differences in average performance across groups. Also, there is substantial overlap in the performance across groups, even if average performance for groups may differ.

One pattern in the background characteristics that was different from bar exam scores and pass rates was that the Asian/Pacific Islander group often had average performance on UGPA, LSAT score, and Index-based LGPA that was comparable to or higher than the Caucasian/White group, yet the Asian/Pacific Islander group's average bar exam scores and pass rates tended to be lower than the Caucasian/White group. Interestingly, the Asian/Pacific Islander group tended to have the largest improvement in average bar exam scores across July exams compared to the other racial/ethnic groups.

Differences in performance on the bar exam across groups were observed before and after UBE adoption. A couple of groups, the Black/African American group and females, tended to see larger differences in bar exam performance compared to other groups at the first UBE exam in July 2016 that disappeared in July 2017. However, bar exam performance did not appear to change in consistent ways after UBE adoption that exacerbated group differences existing prior to UBE adoption, particularly when looking at performance between July 2015 and July 2017. If anything, differences appeared to be decreasing somewhat after UBE adoption at the July 2017 bar exam administration.

In this section, bar exam scores and pass rates were studied by gender and race/ethnicity. Next, in section 5, we take a step back and review bar exam scores and pass rates for the entire group of candidates in the NYSBLE sample and school-based sample.

5. How Does Performance on the Bar Exam in New York Compare Before and After UBE Adoption?

5.1 Overview

This section summarizes bar exam performance in New York before and after UBE adoption, covering July 2015, February 2016, July 2016, February 2017, and July 2017 exams. Analysis includes the New York State Board of Law Examiners (NYSBLE) sample and the school-based sample[55] to address the question *how does performance on the bar exam in New York compare before and after UBE adoption*?

MBE scores, written scores, bar exam scores, and pass rates increased between February 2016 and February 2017 and between July 2015, July 2016, and July 2017. In other words, average bar exam performance increased for the bar exams following UBE adoption. Given the increases in background characteristics observed during the same timeframe and described in previous sections (for July exams in particular), the increased performance after UBE adoption was not surprising and not attributable, at least not entirely, to differences in the UBE compared to the New York bar exam.

5.2 Bar Exam Scores and Pass Rates

Table 5.2.1 lists the means and standard deviations of MBE, written, and bar exam scores plus pass rates for the entire NYSBLE sample across each bar exam between July 2015 and July 2017. Performance improved across February exams and across July exams after UBE adoption. Average MBE scores increased from 129.11 to 130.47 in February and 136.76 to 138.83 to 140.98 in July. Average written scores increased by similar margins from 129.07 to 130.10 in February and 136.73 to 138.36 to 140.64 in July. Average bar exam scores increased from 258.20 to 260.62 in February and 273.52 to 277.24 to 281.67 in July. Pass rates increased from 40.5% to 43.8% in February and 60.9% to 63.9% to 68.5% in July. Figures 5.2.1, 5.2.2 and 5.2.3 display the distributions of scores for MBE, written, and bar exam for each February and July exam being considered. The distributions summarize the percentages of candidates at each score and provide a more nuanced summary of scores compared to the means and standard deviations contained in Table 5.2.1.

Across years, it is evident that the distributions shift slightly to the right, which reflects larger percentages of candidates obtaining higher scores. Other than shifts of the entire distributions along the horizontal axis across years, the distributions of scores on the MBE, written component, and bar exam didn't differ much in shape. Finally, Figure 5.2.4, 5.2.5, and

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[55] For explanations of these samples, see section 2.

5.2.6 contain boxplots summarizing the distributions of scores (minimum, 25th percentile, mean, 75th percentile, and maximum) for MBE, written, and bar exam. The lines connecting the boxplots pass through the mean at each bar exam administration. The boxplots illustrate the increasing trends in average scores across years for MBE, written, and bar exam. In addition, the February 25th percentiles (bottom of the box) and 75th percentiles (top of the box) were closer together than the 25th percentiles and 75th percentiles in July, indicating that the February scores tended to be less spread out, which was also evident in the smaller standard deviations for the February exams compared to July (Table 5.2.1).

Table 5.2.1
MBE, Written, and Bar Exam Scaled Scores
New York State Board of Law Examiners Sample

		February 2016 (N = 4193)	February 2017 (N = 4162)	July 2015 (N = 10667)	July 2016 (N = 10297)	July 2017 (N = 9932)
MBE (SEM = 0.2)	Mean	129.11	130.47	136.76	138.83	140.98
	(SD)	(15.81)	(15.69)	(17.92)	(18.34)	(18.63)
Written Scaled Score (SEM = 0.2)	Mean	129.07	130.10	136.73	138.36	140.64
	(SD)	(15.80)	(15.94)	(17.93)	(18.63)	(18.91)
Bar Exam Scaled Score (SEM = 0.3 to 0.4)	Mean	258.20	260.62	273.52	277.24	281.67
	(SD)	(28.66)	(28.72)	(33.36)	(34.83)	(35.46)
Pass (SEM <= 1)		40.5%	43.8%	60.9%	63.9%	68.5%

Figure 5.2.1
MBE Scaled Score Distributions
New York State Board of Law Examiners Sample
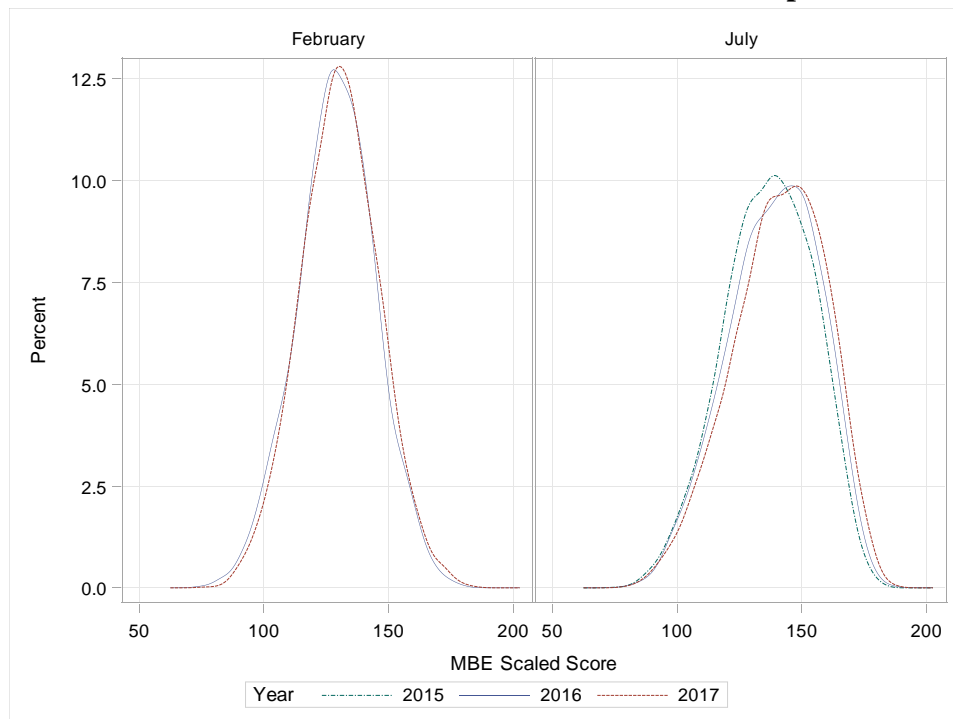
Figure 5.2.2
Written Scaled Score Distributions
New York State Board of Law Examiners Sample
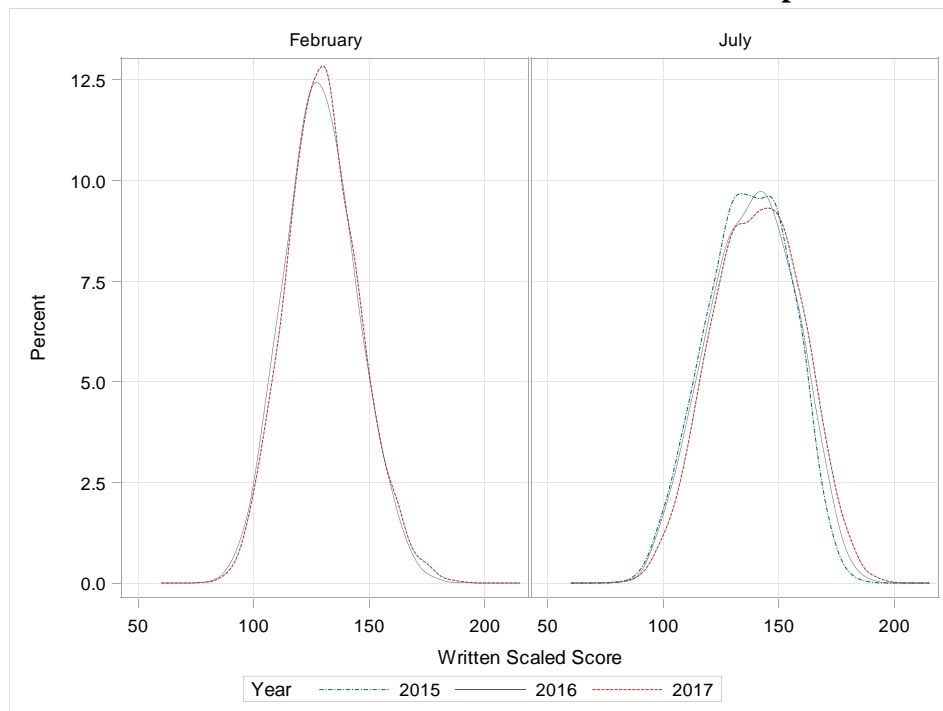
Figure 5.2.3
Bar Exam Scaled Score Distributions
New York State Board of Law Examiners Sample
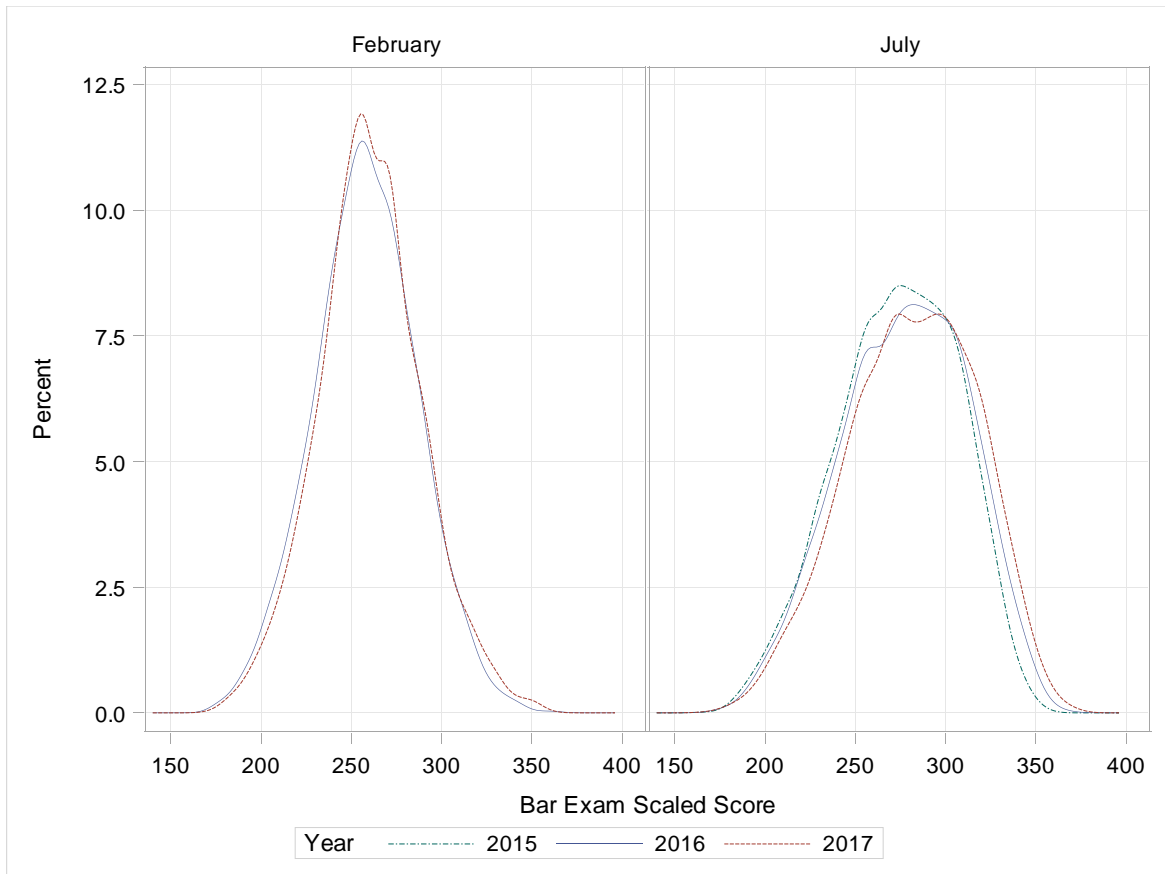
Figure 5.2.4
MBE Scaled Score Boxplots
New York State Board of Law Examiners Sample
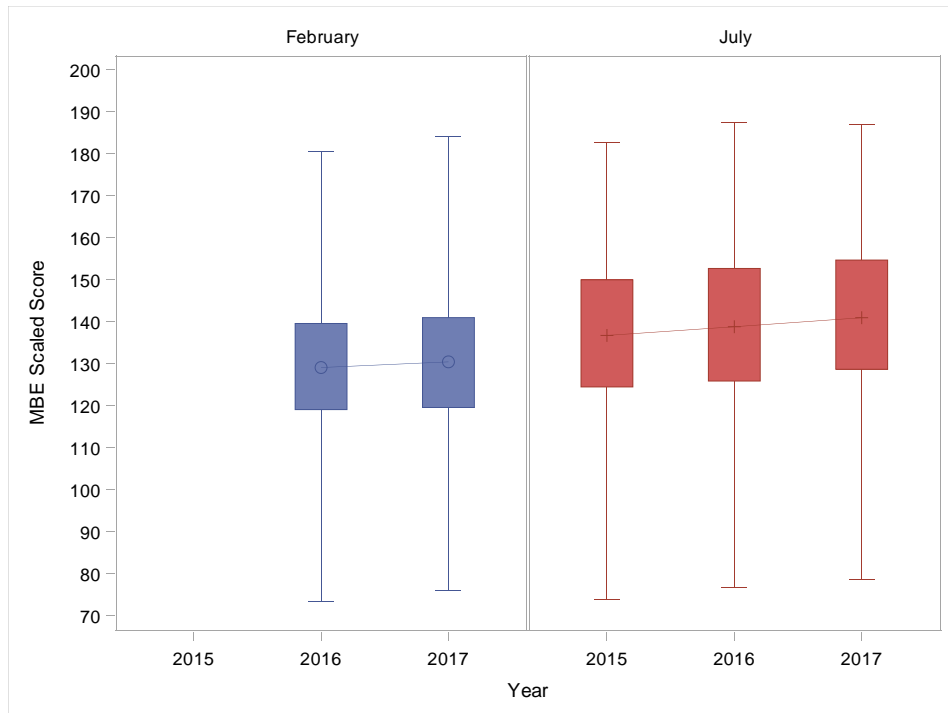
Figure 5.2.5
Written Scaled Score Boxplots
New York State Board of Law Examiners Sample
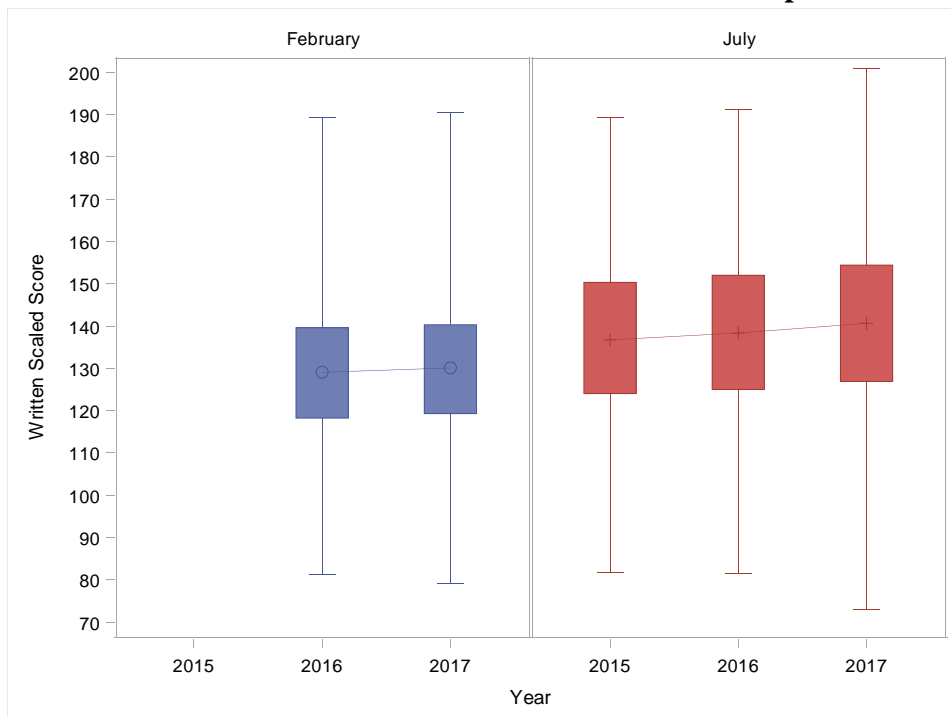
Figure 5.2.6
Bar Exam Scaled Score Boxplots
New York State Board of Law Examiners Sample
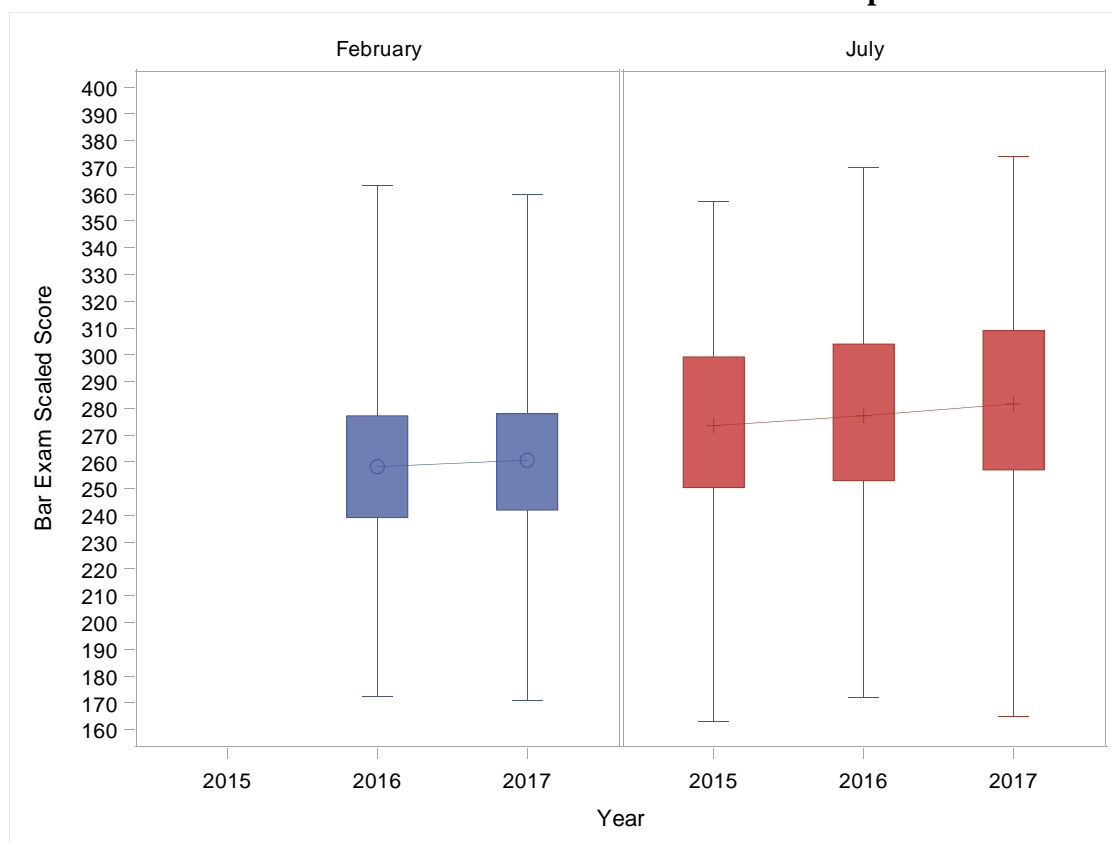
Average scores (and pass rates) were higher for first-time takers, domestic-educated candidates, and domestic-educated first-time takers compared to the entire NYSBLE group, but means for MBE, written, and bar exam scores increased across years. Tables 5.2.2, 5.2.3, and 5.2.4 contain tables with pass rates and means and standard deviations of scores for first-time takers, domestic-educated, and domestic-educated first-time takers in the NYSBLE sample.

Table 5.2.2
MBE, Written, and Bar Exam Scaled Scores
New York State Board of Law Examiners Sample First-time Takers

		February 2016 (N = 1303)	February 2017 (N = 1454)	July 2015 (N = 8587)	July 2016 (N = 8297)	July 2017 (N = 7815)
MBE Scaled Score	Mean	133.97	136.30	140.20	142.32	144.89
(SEM 0.2 to 0.5)	(SD)	(19.03)	(18.00)	(17.21)	(17.60)	(17.77)
Written Scaled Score	Mean	133.08	136.95	140.11	142.04	144.82
(SEM 0.2 to 0.5)	(SD)	(18.94)	(17.67)	(17.17)	(17.83)	(18.00)
Bar Exam Scaled Score	Mean	267.04	273.31	280.27	284.41	289.76
(SEM 0.3 to 1.0)	(SD)	(35.27)	(33.09)	(31.77)	(33.22)	(33.60)
Pass (SEM <= 1)		54.6%	61.3%	70.4%	73.4%	78.4%

Table 5.2.3
MBE, Written, and Bar Exam Scaled Scores
New York State Board of Law Examiners Sample Domestic-educated

		February 2016 (N = 2346)	February 2017 (N = 2370)	July 2015 (N = 7513)	July 2016 (N = 7292)	July 2017 (N = 6776)
MBE Scaled Score	Mean	133.18	133.24	141.71	143.27	145.19
(SEM 0.2 to 0.3)	(SD)	(14.53)	(14.44)	(15.89)	(16.52)	(16.99)
Written Scaled Score	Mean	132.25	133.63	141.56	143.53	145.74
(SEM 0.2 to 0.3)	(SD)	(15.02)	(14.94)	(16.15)	(16.83)	(17.35)
Bar Exam Scaled Score	Mean	265.19	266.93	283.04	286.85	290.98
(SEM 0.3 to 0.5)	(SD)	(26.50)	(26.20)	(29.33)	(31.01)	(32.18)
Pass (SEM = 1)		48.7%	51.5%	72.5%	75.1%	78.0%

Table 5.2.4
MBE, Written, and Bar Exam Scaled Scores
New York State Board of Law Examiners Sample Domestic-educated, First-time Takers

		February 2016 (N = 803)	February 2017 (N = 905)	July 2015 (N = 6536)	July 2016 (N = 6232)	July 2017 (N = 5742)
MBE Scaled Score	Mean	140.10	140.18	144.15	146.11	148.37
(SEM 0.2 to 0.6)	(SD)	(16.09)	(15.74)	(14.95)	(15.42)	(15.70)
Written Scaled Score	Mean	137.64	140.28	143.96	146.43	148.96
(SEM 0.2 to 0.6)	(SD)	(17.25)	(15.95)	(15.13)	(15.72)	(16.16)
Bar Exam Scaled Score	Mean	277.31	280.53	287.86	292.59	297.37
(SEM 0.3 to 1.1)	(SD)	(30.45)	(28.87)	(27.17)	(28.65)	(29.54)
Pass (SEM <= 0.2)		67.1%	70.5%	79.3%	82.8%	86.0%

Tables 5.2.5 and 5.2.6 list pass rates and means and standard deviations for MBE, written, and bar exam scores for candidates in the entire school-based sample and first-time takers, respectively (which contain only domestic-educated candidates). Similar to the NYSBLE sample, average scores and pass rates increased across February exams and July exams. However, the means and pass rates for the school-based sample in February tended to in some places be quite a bit lower than the means and pass rates for the domestic-educated and domestic-educated first-time taker NYSBLE sample in February, which indicates that the school-based sample (which was a subset of the domestic-educated candidates in the NYSBLE sample) in February may not well represent the entire NYSBLE sample. This has been an important note throughout this study because the school-based sample was used to summarize background characteristics and the extent to which it was not representative of the entire group of domestic-educated candidates taking the bar exam, limited the defensibility of assuming that the results of the school-based sample would be similar if we had background characteristics available for all domestic-educated candidates. February 2016 first-time takers were particularly different across samples, with an average bar exam score of 277.31 for the domestic-educated first-time taker NYSBLE sample (Table 5.2.4) compared to 244.76 in the first-time taker school-based sample (Table 5.2.6). Also, the pass rate was 67.1% for the domestic-educated NYSBLE sample compared to 3.5% for the first-time taker school-based sample. Due in part to the relatively large differences across school-based samples and NYSBLE samples in February, we did not put much emphasis on the February results from the school-based sample throughout this study. The

July average scores and pass rates also showed some differences in average scores and pass rates across samples but the differences were generally smaller, especially when compared to February 2016 first-time takers.[56]

Table 5.2.5
MBE, Written, and Bar Exam Scaled Scores
School-based Sample

		February 2016 (N = 534)	February 2017 (N = 723)	July 2015 (N = 2084)	July 2016 (N = 4520)	July 2017 (N = 3753)
MBE Scaled Score	Mean	128.45	129.95	142.75	145.10	148.19
(SEM 0.2 to 0.5)	(SD)	(11.19)	(11.43)	(16.30)	(15.96)	(15.97)
Written Scaled Score	Mean	128.19	131.43	142.73	145.65	149.05
(SEM 0.2 to 0.5)	(SD)	(12.13)	(12.23)	(16.25)	(16.14)	(16.40)
Bar Exam Scaled Score	Mean	256.56	261.43	285.19	290.80	297.29
(SEM 0.4 to 0.8)	(SD)	(19.35)	(19.71)	(29.75)	(29.68)	(30.10)
Pass (SEM 1 to 2)		27.9%	44.5%	73.2%	79.6%	85.1%

Table 5.2.6
MBE, Written, and Bar Exam Scaled Scores
School-based Sample First-time Takers

		February 2016 (N = 85)	February 2017 (N = 92)	July 2015 (N = 1873)	July 2016 (N = 4070)	July 2017 (N = 3405)
MBE Scaled Score	Mean	123.58	128.12	144.58	147.06	150.23
(SEM 0.2 to 1.5)	(SD)	(9.94)	(14.03)	(15.78)	(15.15)	(14.89)
Written Scaled Score	Mean	120.59	129.25	144.46	147.56	151.06
(SEM 0.2 to 1.4)	(SD)	(10.58)	(13.22)	(15.73)	(15.39)	(15.42)
Bar Exam Scaled Score	Mean	244.76	257.45	288.71	294.67	301.34
(SEM 0.4 to 2.6)	(SD)	(16.18)	(24.74)	(28.65)	(28.00)	(27.89)
Pass (SEM 1 to 5)		3.5%	30.4%	78.3%	84.8%	90.0%

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[56] A factor contributing to differences in February first-time taker results across samples was instability due to relatively small sample sizes of 85 in February 2016 and 92 in February 2017 for the first-time taker school-based sample.

5.3 Summary

Despite differences observed when comparing the school-based sample to the NYSBLE sample, which may limit how generalizable the school-based sample results are to the domestic-educated NYSBLE sample, the trends in pass rates and average scores on the MBE, written component, and bar exam increased after UBE adoption. When this pattern is compared to the patterns of background characteristics in section 3 using the school-based sample, we see that background characteristics (UGPA, LSAT score, 4-point LGPA, and Index-based LGPA) tended to remain constant or increase across years (see Tables 3.2.1 and 3.2.2), with the exception of average LSAT scores, which dipped slightly between (a) July 2015 and July 2016 for the school-based sample and first-time takers in the school based sample and (b) February 2016 and February 2017 for the school-based sample. The patterns in mean scores and pass rates after UBE adoption were generally consistent with the patterns in average performance on UGPA, LSAT, and LGPA after UBE adoption. The pattern was not perfect, but background characteristics explained at least a portion of the improvement in bar exam scores after UBE adoption.[57] It is also worth noting that average MBE scores increased before and after UBE adoption, which supports the idea that increase in bar exam performance after UBE adoption was not due solely to the UBE being a different exam from the New York bar exam. Next, in section 6 we compare the MBE performance in New York to all other jurisdictions to explore how trends in New York compare to all other jurisdictions using the MBE.

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[57] These relationships are explored further in section 7 and Appendix O.

6. How Does Performance on the MBE in New York Compare to MBE Performance in All Other Jurisdictions Before and After New York Adopted the UBE?

In this section, we used National Conference of Bar Examiners (NCBE) MBE data to compare New York's average MBE scores to average MBE scores of all other jurisdictions.[58] This section is intended to address the question *how does performance on the MBE in New York compare to MBE performance in all other jurisdictions before and after New York adopted the UBE?* The quick answer is that New York's average MBE performance (a) increased between July 2015 and July 2016 when the averages for all other jurisdictions remained consistent (and increased more than all other jurisdictions between July 2016 and July 2017) and (b) increased between February 2016 and February 2017 when the averages for all other jurisdictions decreased.

Tables 6.1 and 6.2 list the means, standard deviations, minimum, maximum, 25th percentile, 50th percentile, 75th percentile, and maximum score for New York and all other jurisdictions using NCBE data between 2008 and 2017. Figure 6.1 displays the average MBE scaled scores for New York candidates (blue/solid) and average MBE scaled scores for all other jurisdictions (i.e., excluding New York; red/dashed) between 2008 and 2017. New York's average MBE score is lower than those of all other jurisdictions. This pattern is likely due to the population of candidates taking the bar exam in New York, specifically the relatively large percentage of foreign-educated candidates taking the New York bar exam that tend to score somewhat lower, on average, on the MBE specifically and the bar exam in general.[59] However, what is particularly interesting in Figure 6.1 is the year-to-year pattern in average MBE scores between July 2015 and July 2016 when New York adopted the UBE.

Average MBE scores for New York have been increasing after UBE adoption in July 2016. In July, these increases (136.6 in 2015 to 138.8 in 2016 to 141.0 in 2017) were larger than those observed for all other jurisdictions (140.8 to 140.8 to 141.9). In February, all other jurisdictions saw a decrease in average MBE scores between 2016 and 2017 (from 136.2 to 134.9) but New York saw an increase (from 129.1 to 130.5). Because the MBE is a consistent measure,[60] the increasing pattern of average MBE scaled scores is consistent with the hypothesis that candidates in New York were better prepared, on average, between July 2015 and July 2016 (and between February 2016 and February 2017) before and after UBE adoption. It is possible

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[58] This is the only analysis in this study that did not use data obtained from the New York State Board of Law Examiners.

[59] Foreign-educated candidates make up a much smaller percentage of the national population of candidates.

[60] Although, note that the weighting of the MBE is 50% under UBE and was 40% in the previous New York bar exam.

that the shift in performance in MBE is related to UBE adoption in the sense that UBE adoption may have affected the group of candidates deciding to take the bar exam in New York or affected the preparation of candidates for the bar exam in New York. Section 3, which summarized performance for UGPA, LSAT score, and LGPA for a sub-set of candidates in New York, indicated that performance on background characteristics had also generally been shifting upward after UBE adoption, especially when considering July 2017, an indication that the score increase on the MBE in New York after UBE adoption is consistent with increases in performance on candidate background characteristics. Still, it is possible that UBE adoption has led to changes in the group of candidates choosing to test in New York or to changes in the preparation of candidates testing in New York. Another way of exploring shifts in performance on the bar exam against background characteristics is to use statistical models to study them, which follows in section 7 (and Appendix O).

Table 6.1
Summary of July MBE Scaled Scores
NCBE data for New York and All Other Jurisdictions

Jurisdiction	Year	N	Mean	(SD)	Minimum	25%	50%	75%	Maximum
New York	2008	10847	142.8	(17.5)	77.2	130.8	144.4	155.8	186.3
	2009	10998	141.4	(17.8)	64.7	129.8	143.7	154.7	182.3
	2010	11025	140.1	(17.5)	75.4	129.1	141.5	152.8	185.2
	2011	10932	140.0	(17.0)	61.8	128.7	140.8	152.7	183.0
	2012	11419	139.4	(17.1)	58.3	128.3	140.4	151.6	184.0
	2013	11416	140.7	(18.5)	76.4	128.3	141.5	154.5	189.9
	2014	10908	138.3	(18.1)	79.3	126.4	139.1	151.8	184.0
	2015	10410	136.6	(18.0)	73.8	124.5	137.6	150.0	182.6
	2016	10283	138.8	(18.4)	76.8	125.9	140.0	152.7	187.4
	2017	9934	141.0	(18.6)	78.7	128.7	141.9	154.7	186.9
All Other Jurisdictions	2008	39164	146.4	(15.0)	75.3	135.8	147.0	157.5	189.7
	2009	39387	145.3	(15.1)	75.0	135.4	146.2	156.4	187.8
	2010	39089	144.6	(14.7)	78.1	134.5	145.5	155.3	188.7
	2011	39001	144.9	(15.1)	39.4	135.0	145.8	156.2	187.6
	2012	40918	144.5	(14.8)	71.7	134.6	145.5	155.2	188.4
	2013	42290	145.2	(15.8)	41.2	134.8	145.8	156.3	189.2
	2014	40097	142.3	(15.3)	44.4	131.5	142.9	153.4	187.5
	2015	37974	140.8	(15.4)	47.7	130.2	141.4	151.7	186.1
	2016	36235	140.8	(16.2)	58.6	129.4	141.5	152.7	187.4
	2017	36692	141.9	(16.2)	53.4	130.9	142.6	153.9	190.3

Table 6.2
Summary of February MBE Scaled Scores
NCBE data for New York and All Other Jurisdictions

Jurisdiction	Year	N	Mean	(SD)	Minimum	25%	50%	75%	Maximum
New York	2008	3499	131.6	(16.2)	79.4	121.3	131.6	142.2	181.6
	2009	3224	128.3	(15.8)	81.9	118.1	128.1	138.7	176.6
	2010	3397	128.5	(15.8)	77.2	118.1	129.0	139.2	180.4
	2011	3826	131.3	(16.1)	74.5	120.9	131.4	142.2	181.9
	2012	3923	130.2	(16.5)	78.3	119.6	130.3	140.7	183.9
	2013	4085	131.7	(16.0)	76.0	121.3	132.0	142.4	183.2
	2014	3944	131.2	(16.2)	73.3	120.2	131.7	142.7	181.5
	2015	3932	129.7	(15.9)	81.9	119.5	130.2	140.8	185.2
	2016	4136	129.1	(15.8)	73.4	119.1	129.4	139.6	180.6
	2017	4161	130.5	(15.7)	76.0	119.6	130.4	141.0	184.2
All Other Jurisdictions	2008	17323	138.9	(14.6)	72.0	129.2	138.9	149.0	184.3
	2009	15644	137.2	(14.6)	80.7	127.3	136.9	147.7	186.8
	2010	16107	138.3	(14.4)	60.3	129.0	138.4	148.0	185.3
	2011	16543	140.3	(14.1)	53.9	131.4	140.5	149.8	184.6
	2012	16772	138.6	(15.1)	74.3	128.7	138.9	149.5	183.9
	2013	17493	139.5	(14.2)	73.3	129.8	139.4	149.2	183.2
	2014	18139	139.4	(14.6)	70.7	129.5	139.8	149.5	187.1
	2015	18464	137.5	(14.5)	63.5	127.6	137.8	147.4	185.2
	2016	19189	136.2	(14.5)	49.5	126.6	135.9	145.7	188.2
	2017	18108	134.9	(14.3)	66.2	124.9	134.6	144.7	187.9

Figure 6.1
Mean MBE Scaled Scores
NCBE data for New York and All Other Jurisdictions
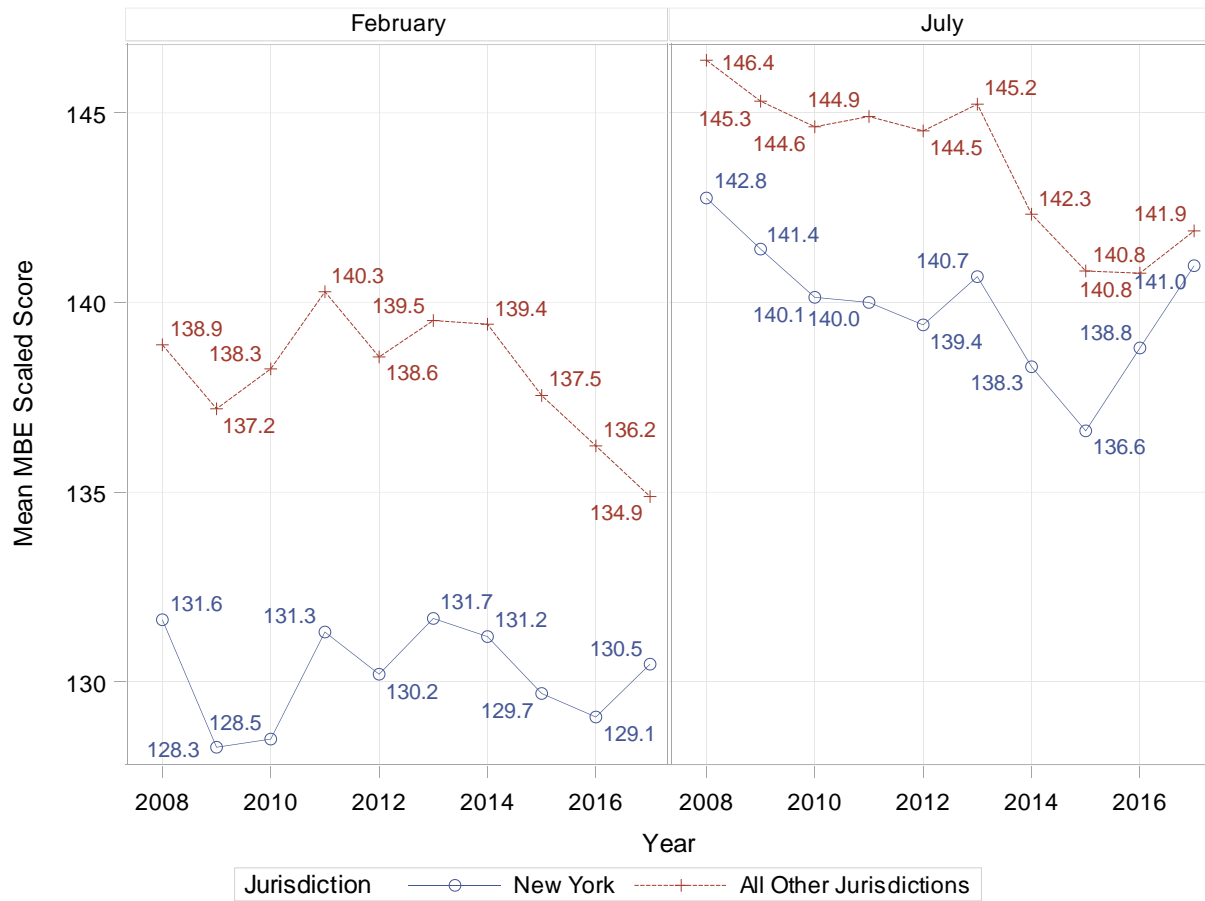
7. What Candidate Variables Best Predict Performance on the Bar Exam?

7.1 Overview

Throughout this study, we have generally presented results in tables and figures with simple summary statistics like means and standard deviations, so that the reader might review the results in a straightforward way. Sections 3, 4, and 5 provided summaries of background candidate variables and bar exam scores using means and standard deviations to compare performance across bar exams (before and after UBE adoption) and across groups (gender and race/ethnicity). In this section, background candidate characteristics and bar exam scores were entered into statistical models to study how background candidate characteristics contributed to predicting bar exam scores, but the results should not be particularly surprising given the analysis in previous sections. Specifically, linear regression[61] was used to predict bar exam scores using candidate background characteristics: undergraduate grade point average (UGPA), Law School Admission Test (LSAT) score, and law school grade point average (LGPA).

In addition, performance on the bar exam was modeled with background characteristics plus gender or race/ethnicity to identify the extent to which gender or race/ethnicity differed after accounting for background characteristics. Specifically, we examined whether groups defined by gender or race/ethnicity had statistically meaningful differences in bar exam scores after controlling for UGPA, LSAT score, and LGPA.

A key concept in predicting performance using regression models is the correlation. As indicated in previous sections, the correlation describes the magnitude of linear relationship between variables. A positive relationship means that as values on one variable increases, values on another variable also tend to increase. A negative relationship means that as values on one variable increases, values on another variable tend to decrease. A commonly used measure of the strength of the association (or prediction accuracy) between the dependent variable (the variable to be predicted; e.g., bar exam scores) and the independent variables (those used to make the prediction; e.g., LGPA), is the percentage of variance in the dependent variable accounted for (or predicted) by the independent variables. When a linear regression contains two variables, one independent variable (predictor) and one dependent variable, the percentage of variance accounted for is the correlation between the two variables squared. It is generally designated as R^2, and in the context of regression models like those below with multiple independent variables, it is the squared correlation between the dependent variable and a combination of the

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[61] There are a variety of ways of modeling predictors of bar exam scores, but linear regression is commonly used and relatively straightforward, which is one of the reasons we used it here. The approach that we took here was to include LGPAs in linear regression models using the two different ways of scaling LGPAs we have included throughout this study, which indirectly accounted for school level effects (in the case of Index-based LGPA) or essentially ignored school-level effects (4-point LGPA). Another approach is to use analysis of variance (ANOVA), which was used in the technical analysis in Appendix O.

independent variables (the multiple correlation coefficient). R^2 will be used in reporting the results for linear regression reported in this section. Higher values of R^2 indicate a stronger association (or better prediction), with the maximum R^2 being 1.0, which corresponds to 100% of the variance in the dependent variable being accounted for (or predicted) by the independent variable (or variables). The change in R^2 can also be used to study the extent to which adding a particular variable (or variables) to the linear regression model contributes to explaining more of the variance in the dependent variable (i.e., bar exam scores).

Linear regression involves estimating a linear equation that includes the variables of interest. For our purposes, we are interested in how well UGPA, LSAT score, LGPA (and gender or race/ethnicity) predict bar exam scores and whether each variable predicts bar exam scores in a statistically meaningful way after considering (or accounting for) the other variables included in the regression model. The equation developed by modeling using linear regression includes bar exam scores on one side of the equation and a linear combination of the background characteristics (and gender or race/ethnicity, if included) on the other. Each of the background characteristics (and gender or race/ethnicity) has a regression coefficient (B) associated with it that can be used to determine the predicted effect of each variable on bar exam scores. These coefficients can be tested to determine whether they are large enough to be statistically meaningful.

The school-based sample (see section 2) was used to build models for predicting bar exam performance. Modeling was conducted for (a) all candidates in the school-based sample (which, by definition included only domestic-educated candidates) and (b) all first-time takers in the school-based sample (again, domestic-educated only). Before describing the linear regression results, it is helpful to review the basics of the data, specifically the means, standard deviations, and correlations among background characteristics for the school-based sample and first-time takers in the school based sample.

7.2 Means, Standard Deviations, and Relationships Among Variables

Table 7.2.1 contains the means and standard deviations for UGPA, LSAT score, 4-point LGPA, Index-based LGPA, and bar exam scores by bar exam administration for the school-based sample. These statistics have been presented in other places in this study but it is helpful to point out some overall trends. First, means for background characteristics tended to be consistent or increase slightly across Februarys and across Julys. The one exception was average LSAT score, which decreased between February 2016 and February 2017 and between July 2015 and July 2016. Average bar exam scores increased across Februarys and across Julys. Similar patterns were observed for first-time takers (Table 7.2.2), except that average LSAT score did not decrease between Februarys. At various places throughout this study, we have mentioned that February results tended to be unusual and the school-based sample specifically may not well represent the entire group of domestic-educated candidates taking the bar exam in New York.

This is especially true of first-time takers in the school-based sample, which included a relatively small number of candidates in February (85 or 92). Another factor that likely contributed to the unusual results for February was that the majority of candidates tended to be repeat test takers,[62] and those taking the exam for the first time in the February school-based sample tended to be different from all New York domestic-educated first-time takers in July (see Table 7.2.2, where mean background characteristics and bar exam scores for February first-time takers were lower than July).

Table 7.2.1
UGPA, LSAT, LGPA, and Bar Exam Means and Standard Deviations
School-based Sample

		February		July		
		2016 (N=534)	2017 (N=723)	2015 (N=2084)	2016 (N=4520)	2017 (N=3753)
UGPA	Mean (SD)	3.18 (0.43)	3.18 (0.43)	3.43 (0.40)	3.43 (0.39)	3.48 (0.38)
LSAT Score	Mean (SD)	153.30 (7.37)	153.08 (7.08)	159.93 (8.79)	159.68 (8.40)	160.65 (8.65)
4-point LGPA	Mean (SD)	3.02 (0.29)	3.03 (0.29)	3.32 (0.34)	3.32 (0.33)	3.33 (0.34)
Index-based LGPA	Mean (SD)	8.89 (0.61)	8.99 (0.62)	9.82 (0.92)	9.90 (0.86)	10.06 (0.87)
Bar Exam Scaled Score	Mean (SD)	256.56 (19.35)	261.43 (19.71)	285.19 (29.75)	290.80 (29.68)	297.29 (30.10)

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[62] This is not unique to New York and is a pattern observed nationally.

Table 7.2.2
UGPA, LSAT, LGPA, and Bar Exam Means and Standard Deviations
First-Time Taker School-based Sample

		February		July		
		2016 (N=85)	2017 (N=92)	2015 (N=1873)	2016 (N=4070)	2017 (N=3405)
UGPA	Mean (SD)	3.10 (0.40)	3.21 (0.42)	3.46 (0.38)	3.46 (0.38)	3.52 (0.35)
LSAT Score	Mean (SD)	153.64 (7.31)	155.33 (8.52)	160.78 (8.50)	160.40 (8.18)	161.48 (8.37)
4-pt LGPA	Mean (SD)	3.00 (0.29)	3.07 (0.31)	3.35 (0.32)	3.35 (0.32)	3.37 (0.32)
Index-based LGPA	Mean (SD)	8.90 (0.57)	9.26 (0.70)	9.95 (0.85)	10.03 (0.79)	10.18 (0.79)
Bar Exam Scaled Score	Mean (SD)	244.76 (16.18)	257.45 (24.74)	288.71 (28.65)	294.67 (28.00)	301.34 (27.89)

Table 7.2.3 lists the correlations among UGPAs, LSAT scores, 4-point LGPAs, Index-based LGPAs, and bar exam scores for candidates in the school-based sample. Similar to the means described above, the correlations for the February candidates are unusual in some places; generally, the correlations were lower than expected and lower than July correlations. A specific anomaly was the negative correlation between 4-point LGPA and LSAT scores, which indicates a negative relationship between 4-point LGPA and LSAT scores; as 4-point LGPA increase, LSAT scores tended to decrease. This anomaly is likely due to the atypical nature of the February candidates as described above.

Despite February's lower correlations, it appeared that general patterns in correlations before and after UBE adoption were not too different across February 2016 and February 2017. With the February correlations being relatively low, we expected the linear regression results for February exams to potentially be unusual, too, and we will not put much emphasis on the February linear regression results below, particularly when the regression included first-time takers, because there were relatively small sample sizes in those groups.[63]

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[63] We might have excluded the February exams from the analysis entirely, but opted to retain them and limit how much we considered the results as (a) representative of the entire group of domestic-educated candidates testing in February and (b) reasonable estimates of relationships among variables and predictors of bar exam scores. We encourage readers to interpret the February results with extreme caution.

July correlations were larger than February and were more consistent with correlations we have observed among UGPA, LSAT score, LGPA, and bar exam scores in other studies for New York and other studies that have included these variables. The correlations between Index-based LGPA and bar exam scores were highest (.75 to .76), followed by 4-point LGPA (.61 to .65), then LSAT scores (.56 to .57), and UGPA (.40 to .46). Variables more proximal to bar exam scores had higher correlations than more distal variables. Index-based LGPAs account for LSAT scores and UGPAs at the law school level, so it isn't surprising that, of the two LGPAs, Index-based LGPA had higher correlations with bar exam scores because it accounted for school-level UGPA and LSAT performance. This also meant that the correlations between Index-based LGPAs and (a) LSAT score and (b) UGPA were in a sense artificially boosted because LSAT score and UGPA effects were incorporated into Index-based LGPAs. In general, the correlations observed across July exams were similar, which indicated that the relationships among background and bar exam scores did not change after UBE adoption, even though the bar exams before and after UBE differed somewhat.

The strong positive correlations between background characteristics and bar exam scores in July indicate that background characteristics will be useful for predicting bar exam scores. One issue is the extent to which each background characteristic contributes to predicting bar exam scores after accounting (or controlling) for other background characteristics. Also of interest is whether candidates grouped by gender or race/ethnicity differ after accounting for background characteristics. Modeling with linear regression is presented in the next section to address these issues.

Table 7.2.3
UGPA, LSAT, LGPA, and Bar Exam Pearson Correlations
School-based Sample

	February										July															
	UGPA		LSAT Score		4-point LGPA		Index-based LGPA		Bar Exam Scaled Score		UGPA			LSAT Score			4-point LGPA			Index-based LGPA			Bar Exam Scaled Score		
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
UGPA	1	1	.16	.14	.02	.06	.42	.39	.21	.21	1	1	1	.41	.40	.44	.27	.21	.27	.57	.55	.58	.46	.40	.45
LSAT Score	.16	.14	1	1	-.24	-.14	.53	.53	.21	.24	.41	.40	.44	1	1	1	.23	.16	.22	.78	.76	.76	.56	.57	.57
4-pt LGPA	.02	.06	-.24	-.14	1	1	.34	.42	.27	.28	.27	.21	.27	.23	.16	.22	1	1	1	.61	.57	.62	.65	.61	.61
Index-based LGPA	.42	.39	.53	.53	.34	.42	1	1	.38	.44	.57	.55	.58	.78	.76	.76	.61	.57	.62	1	1	1	.76	.75	.75
Bar Exam Scaled Score	.21	.21	.21	.24	.27	.28	.38	.44	1	1	.46	.40	.45	.56	.57	.57	.65	.61	.61	.76	.75	.75	1	1	1

February 2016 N = 534, February 2017 N = 723, July 2015 N = 2084, July 2016 N = 4520, July 2017 N = 3753

Table 7.2.4
UGPA, LSAT, LGPA, and Bar Exam Pearson Correlations
First-Time Taker School-based Sample

	February										July														
	UGPA		LSAT Score		4-point LGPA		Index-based LGPA		Bar Exam Scaled Score		UGPA			LSAT Score			4-point LGPA			Index-based LGPA			Bar Exam Scaled Score		
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
UGPA	1	1	.13	.29	-.02	.14	.36	.45	.19	.37	1	1	1	.40	.39	.41	.22	.17	.22	.55	.53	.55	.42	.37	.40
LSAT Score	.13	.29	1	1	-.24	-.06	.48	.66	.12	.54	.40	.39	.41	1	1	1	.18	.12	.15	.77	.76	.75	.53	.55	.53
4-pt LGPA	-.02	.14	-.24	-.06	1	1	.36	.49	.33	.29	.22	.17	.22	.18	.12	.15	1	1	1	.57	.52	.57	.64	.59	.56
Index-based LGPA	.36	.45	.48	.66	.36	.49	1	1	.24	.66	.55	.53	.55	.77	.76	.75	.57	.52	.57	1	1	1	.74	.72	.71
Bar Exam Scaled Score	.19	.37	.12	.54	.33	.29	.24	.66	1	1	.42	.37	.40	.53	.55	.53	.64	.59	.56	.74	.72	.71	1	1	1

February 2016 N = 85, February 2017 N = 92, July 2015 N = 1873, July 2016 N = 4070, July 2017 N = 3405

7.3 Modeling and Predicting Performance on the Bar Exam

In this section, linear regression was used to predict bar exam scores using a combination of UGPA, LSAT score, 4-point LGPA, and Index-based LGPA. Separate regressions were conducted for each bar exam administration: February 2016, February 2017, July 2015, July 2016, and July 2017 using the school-based sample or first-time takers from the school-based sample (which contain domestic-educated candidates only). Separate regression models were obtained using 4-point LGPA or Index-based LGPA because these variables represented different ways of addressing the scale of LGPAs (see section 2.4 for an explanation). As indicated in previous sections, February results were not emphasized due to the unusual and potentially unstable nature of the data, but they were included because they do illustrate the characteristics of the available data.

Table 7.3.1 contains linear regression results predicting bar exam scores using (a) 4-point LGPA only (Model 1) and (b) 4-point LGPA, UGPA, and LSAT score (Model 2) with data from the school-based sample for each available bar examination. Modeling was first conducted with LGPA only and then with LGPA, UGPA, and LSAT score to review the extent to which UGPA and LSAT score added to the prediction of bar exam scores. The values in the table include regression coefficients (B), the standard errors of regression coefficients (SE), and the proportion of variance in bar exam scores explained by the regression model (R^2). Regression coefficients with asterisks were statistically significant.[64]

For example, the fourth row in Table 7.3.1 contains the regression results for school-based sample candidates taking the July 2015 bar exam (which had 2,084 candidates). The column with "Model 1: LGPA" contains the regression coefficients, standard errors, and proportion of variance explained by the linear regression model that predicts bar exam scores based on 4-point LGPA only (UGPA and LSAT are greyed out to indicate that they are not included in Model 1). The variable "Intercept" contains an estimate of the y-intercept (97.09) for the linear model.[65] A statistically significant coefficient, as observed for July 2015, indicates that

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[64] A Type-I error rate of .01 was used throughout this section (this is also often referred to as alpha level). This determines the probability level (p) at which regression coefficients were identified as statistically significant. The .01 level means that 1 time out of 100 a statistically significant result would be identified when one really did not exist (p < .01 indicates a less than 1% chance of finding a spurious result). Conventionally, researchers often use a .05 value, but we chose a more stringent criterion because we didn't want to inappropriately over-identify results as statistically significant when conducting a relatively large number of statistical tests throughout this section.

[65] Y-intercepts in models here indicate the bar exam score predicted if all other variables included in the model were zero. In some cases, the y-intercept was negative, which indicates that the bar exam score would be predicted to be negative when all other variables in the model were zero. Of course, a negative bar exam score is not possible in practice and is indicative that the linear model predictions do not extrapolate well outside of the observed data, in part because values of zero for all variables may not be realistic. For example, none of the examinees included in the datasets had law school GPAs of zero, LSAT scores of zero, or UGPAs of zero, which would not be realistic values for anyone taking the bar exam to obtain.

the intercept was different from zero. Intercepts are typically not of primary interest when interpreting regression results, although they are needed for obtaining predicted bar exam scores based on the predictors in the regression model. The regression coefficient for the 4-point LGPA variable (56.69) was statistically significant, which indicates that 4-point LGPA was a statistically significant predictor of bar exam scores. In addition, R^2 was .422, which indicates that roughly 42% of the variance in bar exam scores was explained by 4-point LGPA.[66] The column with "Model 2: LGPA, UGPA, LSAT" adds UGPA and LSAT score to the previous linear regression model. In this model, each regression coefficient was statistically significant, such that 4-point LGPA, UGPA, and LSAT scores were each statistically meaningfully predictors of bar exam scores. Roughly 62% of the variance in bar exam scores was explained by the model, an increase of roughly 20 percentage points compared to the 4-point LGPA-only model.

Each of the linear regression models for the July bar exams showed similar results. 4-point LGPA, UGPA, and LSAT scores were statistically significant predictors of bar exam scores and the percentage of variance explained by adding UGPA and LSAT scores was at least 20 percentage points more than 4-point LGPA alone. The percentage of variance explained decreased slightly across July 2015 to July 2017 from 62.2% to 60.9% to 58.5%.

4-point LGPA, UGPA, and LSAT scores were also statistically significant predictors for the February linear regression models and explained roughly 10 percentage points more variance than the 4-point LGPA-only models. However, the February models only explained about 18% of the variance in bar exam scores.

The results of the models in Table 7.3.1 indicate that for the school-based sample, 4-point LGPA, UGPA, and LSAT score were statistically meaningful predictors of bar exam scores. This is consistent with the correlation tables above and analysis in Section 3.6, where higher performance on each background characteristic was associated with higher scores on the bar exam.

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[66] Because this linear regression model has a single independent variable, LGPA, R^2 is equal to the square of the correlation between LGPA and bar exam score (see Table 7.2.3): .65 x .65 = .422.

Table 7.3.1
Linear Regression Predicting Bar Exam Scores
4-point LGPA, UGPA, and LSAT
School-based Sample

Administration	Variable	Model 1: LGPA			Model 2: LGPA, UGPA, LSAT		
		B	(SE)	R^2	B	(SE)	R^2
February 2016 (N = 534)	Intercept	203.03*	(8.41)	.071	62.96*	(20.07)	.177
	4-point LGPA	17.72*	(2.77)		21.65*	(2.70)	
	UGPA				7.46*	(1.80)	
	LSAT				0.68*	(0.11)	
February 2017 (N = 723)	Intercept	202.65*	(7.54)	.079	62.62*	(17.23)	.181
	4-point LGPA	19.37*	(2.47)		21.31*	(2.36)	
	UGPA				7.18*	(1.58)	
	LSAT				0.73*	(0.10)	
July 2015 (N = 2084)	Intercept	97.09*	(4.85)	.422	-110.08*	(7.66)	.622
	4-point LGPA	56.69*	(1.45)		45.43*	(1.23)	
	UGPA				12.20*	(1.13)	
	LSAT				1.27*	(0.05)	
July 2016 (N = 4520)	Intercept	110.80*	(3.49)	.373	-137.10*	(5.59)	.609
	4-point LGPA	54.27*	(1.05)		45.69*	(0.85)	
	UGPA				8.94*	(0.78)	
	LSAT				1.54*	(0.04)	
July 2017 (N = 3753)	Intercept	117.17*	(3.87)	.368	-110.54*	(6.18)	.585
	4-point LGPA	54.04*	(1.16)		42.79*	(0.98)	
	UGPA				10.98*	(0.95)	
	LSAT				1.41*	(0.04)	

* Statistically significant; p < 0.01

Table 7.3.2 contains linear regression results modeling Index-based LGPA, UGPA, and LSAT scores with bar exam scores for the school-based sample. Model 1 included Index-based LGPA as a predictor of bar exam scores and Model 2 included Index-based LGPA, UGPA, and LSAT scores as predictors. For each of the July bar exams, Index-based LGPAs were statistically significant predictors. UGPA was not a statistically significant predictor and neither was LSAT score, except for July 2015 where LSAT score was statistically significant but a negative predictor such that higher LSAT scores would predict lower bar exam scores.[67] The statistically non-significant (or negative) results for UGPA and LSAT score, combined with the small change in R^2 between Model 1 and Model 2, indicate that these two variables did not add to the prediction of bar exam scores after accounting for Index-based LGPA. Because Index-based LGPAs account for law school level UGPA and LSAT performance, the results indicate that, for the most part, UGPA and LSAT score did not predict bar exam scores beyond the school-level effects captured by Index-based LGPA. February results also (a) had statistically significant effects for Index-based LGPA but not UGPA and LSAT scores and (b) the percentage of variance explained was not much higher for Model 1 and Model 2, although the amount of variance explained was lower for Februarys (roughly 14% to 20%) compared to Julys (roughly 56% to 58%). The linear regression models before and after UBE adoption indicated that Index-based LGPA was the best predictor of bar exam scores and accounted for over 55% of the variance in bar exam scores.

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[67] The statistically significant negative coefficient for LSAT scores in July 2015 was unusual and unexpected. It was statistically significant but was not very large in magnitude; a change of one LSAT point would lead to a decrease of .26 points on the bar exam. LSAT had a small but statistically meaningful negative effect after accounting for school-level performance on LSAT in the Index-based LGPA.

Table 7.3.2
Linear Regression Predicting Bar Exam Scores
Index-based LGPA, UGPA, and LSAT
School-based Sample

Administration	Variable	Model 1:LGPA			Model 2: LGPA, UGPA, LSAT		
		B	(SE)	R^2	B	(SE)	R^2
February 2016 (N = 534)	Intercept	150.95*	(11.26)	.142	144.67*	(16.60)	.146
	Index-based LGPA	11.88*	(1.26)		10.67*	(1.62)	
	UGPA				3.10	(1.99)	
	LSAT				0.05	(0.12)	
February 2017 (N = 723)	Intercept	136.58*	(9.51)	.194	131.83*	(14.62)	.196
	Index-based LGPA	13.89*	(1.06)		13.14*	(1.34)	
	UGPA				2.17	(1.68)	
	LSAT				0.03	(0.11)	
July 2015 (N = 2084)	Intercept	43.07*	(4.57)	.577	62.64*	(8.22)	.580
	Index-based LGPA	24.64*	(0.46)		25.93*	(0.82)	
	UGPA				2.51	(1.30)	
	LSAT				-0.26*	(0.08)	
July 2016 (N = 4520)	Intercept	34.16*	(3.36)	.565	36.75*	(5.77)	.565
	Index-based LGPA	25.92*	(0.34)		26.36*	(0.57)	
	UGPA				-1.31	(0.89)	
	LSAT				-0.02	(0.05)	
July 2017 (N = 3753)	Intercept	35.70*	(3.78)	.563	36.05*	(6.28)	.563
	Index-based LGPA	26.01*	(0.37)		25.86*	(0.64)	
	UGPA				1.09	(1.06)	
	LSAT				-0.02	(0.06)	

* Statistically significant; p < 0.01

Table 7.3.3 contains linear regression results modeling 4-point LGPA, UGPA, and LSAT scores with bar exam scores for first-time takers in the school-based sample. Model 1 included 4-point LGPA as a predictor of bar exam scores and Model 2 included 4-point LGPA, UGPA, and LSAT scores as predictors. February models were based on relatively few candidates (85 and 92) and the results appeared rather unstable, with relatively large standard errors for the regression coefficients and fairly large differences in R^2 between 2016 and 2017. In the interest of not over-interpreting the February results, we won't discuss them further here. July models were more stable and, similar to the entire school-based sample, 4-point LGPA, UGPA, and LSAT scores had statistically significant regression coefficients and led to at least a 20 percentage point increase in variance explained in bar exam scores compared to a model with 4-point LGPA only as a predictor. The percentage of variance explained decreased across July 2015, July 2016, and July 2017 from 60.6% to 58.5% to 53.4%, so that the models after UBE adoption in July explained slightly less variance in bar exam scores than the exam just prior to UBE adoption. Generally, though, the regression models across Julys showed that (a) 4-point LGPA was the

best predictor of bar exam scores and (b) 4-point LGPA, UGPA, and LSAT scores all contributed to predicting bar exam scores.

Table 7.3.3
Linear Regression Predicting Bar Exam Scores
4-point LGPA, UGPA, and LSAT
First-Time Taker School-based Sample

Administration	Variable	Model 1: LGPA			Model 2: LGPA, UGPA, LSAT		
		B	(SE)	R^2	B	(SE)	R^2
February 2016 (N = 85)	Intercept	189.84*	(17.20)	.110	95.06	(43.55)	.182
	4-point LGPA	18.29*	(5.70)		21.06*	(5.71)	
	UGPA				6.81	(4.06)	
	LSAT				0.43	(0.23)	
February 2017 (N = 92)	Intercept	186.10*	(24.71)	.086	-78.13	(42.53)	.429
	4-point LGPA	23.23*	(8.01)		23.72*	(6.50)	
	UGPA				10.82	(5.03)	
	LSAT				1.47*	(0.25)	
July 2015 (N = 1873)	Intercept	99.56*	(5.29)	.408	-112.91*	(8.41)	.606
	4-point LGPA	56.38*	(1.57)		47.35*	(1.32)	
	UGPA				11.84*	(1.22)	
	LSAT				1.25*	(0.05)	
July 2016 (N = 4070)	Intercept	120.26*	(3.79)	.345	-129.01*	(6.03)	.585
	4-point LGPA	52.02*	(1.12)		45.62*	(0.91)	
	UGPA				8.61*	(0.82)	
	LSAT				1.50*	(0.04)	
July 2017 (N = 3405)	Intercept	136.41*	(4.17)	.317	-92.28*	(6.79)	.534
	4-point LGPA	48.95*	(1.23)		41.22*	(1.04)	
	UGPA				9.73*	(1.03)	
	LSAT				1.37*	(0.04)	

* Statistically significant; $p < 0.01$

Table 7.3.4 lists linear regression results modeling Index-based LGPA, UGPA, and LSAT scores with bar exam scores for first-time takers in the school-based sample. Model 1 included Index-based LGPA as a predictor of bar exam scores and Model 2 included Index-based LGPA, UGPA, and LSAT scores as predictors. February results appeared rather unstable and we did not interpret them here. For each July, Index-based LGPAs were statistically significant but UGPA and LSAT score were generally not, with the exception of LSAT score in July 2015 which had a statistically significant negative regression coefficient (similar to Table 7.3.2, the coefficient was statistically significant but relatively small in magnitude). The percentage of variance accounted for did not increase substantially between the model with Index-based LGPA only (Model 1) and Index-based LGPA, UGPA, and LSAT scores (Model 2), so that UGPA and

LSAT score did not add statistically to predicting bar exam scores beyond Index-based LGPA. These results were generally similar to those observed when modeling Index-based LGPA for the entire school-based sample, although the percentages of variance explained by the regression models using first-time takers were somewhat lower (in Julys it was 54.7%, 52.3%, and 50.1% for 2015, 2016, and 2017, respectively, compared to closer to 56% to 58% for the entire school-based sample). July regression models were similar before and after UBE adoption, although the percentage of variance in bar exam scores explained by Index-based LGPA did decrease slightly across Julys.

Table 7.3.4
Linear Regression Predicting Bar Exam Scores
Index-based LGPA, UGPA, and LSAT
First-Time Taker School-based Sample

Administration	Variable	Model 1:LGPA			Model 2: LGPA, UGPA, LSAT		
		B	(SE)	R^2	B	(SE)	R^2
February 2016 (N = 85)	Intercept	183.82*	(26.97)	.058	177.24*	(38.46)	.070
	Index-based LGPA	6.84	(3.02)		5.48	(3.69)	
	UGPA				4.62	(4.61)	
	LSAT				0.03	(0.27)	
February 2017 (N = 92)	Intercept	43.48	(26.02)	.431	-6.08	(35.78)	.459
	Index-based LGPA	23.11*	(2.80)		17.12*	(3.93)	
	UGPA				5.73	(5.18)	
	LSAT				0.56	(0.30)	
July 2015 (N = 1873)	Intercept	42.23*	(5.24)	.543	67.54*	(8.90)	.547
	Index-based LGPA	24.76*	(0.52)		26.84*	(0.91)	
	UGPA				1.75	(1.42)	
	LSAT				-0.32*	(0.08)	
July 2016 (N = 4070)	Intercept	38.58*	(3.85)	.523	41.56*	(6.13)	.523
	Index-based LGPA	25.54*	(0.38)		26.01*	(0.64)	
	UGPA				-1.13	(0.95)	
	LSAT				-0.02	(0.06)	
July 2017 (N = 3405)	Intercept	46.28*	(4.38)	.501	45.76*	(6.68)	.501
	Index-based LGPA	25.05*	(0.43)		24.90*	(0.71)	
	UGPA				0.63	(1.14)	
	LSAT				-0.00	(0.06)	

* Statistically significant; p < 0.01

7.4 Modeling Performance on the Bar Exam with Background Candidate Characteristics and Candidate Groups

In this section, linear regression models were estimated that predicted bar exam scores using a combination of UGPA, LSAT score, 4-point LGPA, Index-based LGPA, gender, and race/ethnicity. Separate regressions were conducted for each bar exam administration in New York between July 2015 and July 2017 using the school-based sample or first-time takers from the school-based sample (which both included domestic-educated candidates only). The distinction between this section and the previous one is that the linear regression models here included gender or race/ethnicity to model whether or not statistically significant group differences existed after accounting for LGPA, LSAT scores, and UGPAs. To model gender, the regression model included a female variable that defined the effect of being female (versus male) on bar exam scores. To model race/ethnicity, the regression model included three groupings: Asian/Pacific Islander, Black/African American, and Hispanic/Latino each of which defined the effect of being in a particular group (versus being in the Caucasian/White group). A statistically significant regression coefficient for a particular grouping indicated that being in a particular group was statistically meaningful and the regression coefficient (B) indicated the predicted effect of the grouping (versus Caucasian/White) on bar exam scores after accounting for other variables (e.g., UGPA, LSAT score, LGPA) in the model.

Table 7.4.1 contains linear regression models predicting bar exam scores using 4-point LGPA, UGPA, LSAT score, and gender for the school-based sample. Similar to previous models, 4-point LGPA, UGPA, and LSAT scores were all statistically significant predictors of bar exam scores. Gender had a statistically significant effect after accounting for 4-point LGPA, UGPA, and LSAT scores in February 2017, where females were predicted to score higher than males (by 3.58 points), and in July 2016, where females were predicted to score lower than males (by 1.98 points). The July 2016 regression model reinforces the observed mean bar exam scores by gender in July 2016, where the difference between males and females increased in July 2016 (e.g. see Figure 4.3.6), and indicated that the increased difference between males and females was not due entirely to differences in 4-point LGPA, UGPA, and LSAT scores. However, the statistically meaningful gender difference did not persist in July 2017, consistent with the decrease in difference between male and female average bar exam scores observed in July 2017. Statistically meaningful differences in bar exam scores between females and males emerged in the UBE administration in July 2016, but did not remain in July 2017.

Table 7.4.1
Linear Regression Predicting Bar Exam Scores
4-point LGPA, UGPA, LSAT, and Gender
School-based Sample

Administration	Variable	Model 3: LGPA, UGPA, LSAT, Gender		
		B	(SE)	R^2
February 2016 (N = 530)	Intercept	61.82*	(20.36)	.178
	4-point LGPA	22.07*	(2.70)	
	UGPA	7.03*	(1.82)	
	LSAT	0.69*	(0.11)	
	Female	0.72	(1.56)	
February 2017 (N = 722)	Intercept	58.17*	(17.24)	.190
	4-point LGPA	21.17*	(2.36)	
	UGPA	6.39*	(1.60)	
	LSAT	0.76*	(0.10)	
	Female	3.58*	(1.37)	
July 2015 (N = 2064)	Intercept	-111.26*	(7.85)	.622
	4-point LGPA	45.49*	(1.24)	
	UGPA	12.09*	(1.15)	
	LSAT	1.27*	(0.05)	
	Female	0.62	(0.83)	
July 2016 (N = 4489)	Intercept	-134.22*	(5.68)	.610
	4-point LGPA	45.54*	(0.85)	
	UGPA	9.36*	(0.79)	
	LSAT	1.52*	(0.04)	
	Female	-1.98*	(0.56)	
July 2017 (N = 3724)	Intercept	-110.92*	(6.28)	.584
	4-point LGPA	42.80*	(0.99)	
	UGPA	10.91*	(0.97)	
	LSAT	1.42*	(0.04)	
	Female	0.50	(0.65)	

* Statistically significant; $p < 0.01$

Table 7.4.2 lists the linear regression model results predicting bar exam scores using Index-based LGPA, UGPA, LSAT score, and gender for the school-based sample. For each bar exam administration, Index-based LGPA was a statistically significant predictor of bar exam score. In addition, for each bar exam administration except July 2015, UGPA and LSAT score were not statistically significant predictors of bar exam score. In July 2015, after accounting for gender, UGPA and Index-based LGPA, LSAT score had a negative regression coefficient, indicating that as LSAT scores increased, bar exam scores were predicted to decrease. As mentioned earlier, the likely reason UGPA and LSAT score were not generally statistically

meaningful predictors when including Index-based LGPA in the model was that Index-based LGPA accounted for school-level UGPA and LSAT performance.

Table 7.4.2
Linear Regression Predicting Bar Exam Scores
Index-based LGPA, UGPA, LSAT, and Gender
School-based Sample

Administration	Variable	Model 3: LGPA, UGPA, LSAT, Gender		
		B	(SE)	R^2
February 2016 (N = 530)	Intercept	144.16*	(16.93)	.147
	Index-based LGPA	10.96*	(1.62)	
	UGPA	2.49	(2.02)	
	LSAT	0.04	(0.13)	
	Female	0.95	(1.59)	
February 2017 (N = 722)	Intercept	127.63*	(14.75)	.202
	Index-based LGPA	12.93*	(1.35)	
	UGPA	1.56	(1.69)	
	LSAT	0.07	(0.11)	
	Female	3.13	(1.36)	
July 2015 (N = 2064)	Intercept	61.59*	(8.38)	.580
	Index-based LGPA	25.99*	(0.82)	
	UGPA	2.24	(1.32)	
	LSAT	-0.25*	(0.08)	
	Female	0.56	(0.87)	
July 2016 (N = 4489)	Intercept	39.59*	(5.85)	.567
	Index-based LGPA	26.27*	(0.57)	
	UGPA	-0.67	(0.90)	
	LSAT	-0.03	(0.05)	
	Female	-2.52*	(0.59)	
July 2017 (N = 3724)	Intercept	36.52*	(6.37)	.562
	Index-based LGPA	25.87*	(0.64)	
	UGPA	1.13	(1.07)	
	LSAT	-0.02	(0.06)	
	Female	0.21	(0.66)	

* Statistically significant; $p < 0.01$

Gender had a statistically significant effect after accounting for Index-based LGPA, UGPA, and LSAT scores in July 2016, where females were predicted to score lower than males (by 2.52 points), which reinforces the observed mean bar exam scores by gender in July 2016, where the difference between males and females increased in July 2016 (e.g. see Figure 4.3.6). This indicates that the increased difference between males and females was not due entirely to differences in Index-based LGPA, UGPA, and LSAT scores. However, the statistically

meaningful gender difference did not persist in July 2017, consistent with the decrease in difference between male and female average bar exam scores in July 2017. Statistically meaningful differences in bar exam scores between females and males emerged in the UBE administration in July 2016, but did not remain in July 2017.

Table 7.4.3 contains linear regression models predicting bar exam scores with 4-point LGPA, UGPA, LSAT score, and racial/ethnic groups. 4-point LGPA, UGPA, and LSAT scores were statistically significant predictors of bar exam scores at each bar exam administration. In addition, the Asian/Pacific Islander group had statistically significant regression coefficients at each July bar exam indicating that after accounting for 4-point LGPA, UGPA, and LSAT score, the Asian/Pacific Islander group was predicted to have lower bar exam scores compared to the Caucasian/White group. The Black/African American and Hispanic/Latino groups did not have statistically significant regression coefficients and the Asian/Pacific Islander group did not have statistically significant regression coefficients in February 2016 or 2017. This regression model indicates that, when models used 4-point LGPAs, UGPAs, and LSAT scores as predictors of bar exam scores, the Asian/Pacific Islander group was predicted to score lower on the bar exam than the Caucasian/White group before and after UBE adoption in July. It was particularly interesting that the Black/African American group was not a statistically significant predictor of bar exam scores in July 2016 given that average bar exam scores for the Black/African American group in the school-based sample appeared to widen slightly between July 2015 and July 2016 (e.g., see Figure 4.3.20). The results here indicate that after statistically controlling for background characteristics (including 4-point LGPA), bar exam scores for the Black/African American group were not statistically different from the Caucasian/White group.

Table 7.4.3
Linear Regression Predicting Bar Exam Scores
4-point LGPA, UGPA, LSAT, and Race/Ethnicity
School-based Sample

Administration	Variable	Model 4: LGPA, UGPA, LSAT, Black/African American		
		B	(SE)	R^2
February 2016 (N = 477)	Intercept	51.77	(22.39)	.194
	4-point LGPA	23.94*	(2.93)	
	UGPA	6.73*	(1.93)	
	LSAT	0.73*	(0.12)	
	Asian/Pacific Islander	-3.78	(2.21)	
	Black/African American	1.74	(2.31)	
	Hispanic/Latino	2.12	(2.92)	
February 2017 (N = 664)	Intercept	58.99*	(18.75)	.191
	4-point LGPA	21.22*	(2.50)	
	UGPA	8.08*	(1.67)	
	LSAT	0.72*	(0.10)	
	Asian/Pacific Islander	4.04	(1.95)	
	Black/African American	2.72	(1.87)	
	Hispanic/Latino	4.59	(2.39)	
July 2015 (N = 1928)	Intercept	-114.55*	(8.60)	.624
	4-point LGPA	44.83*	(1.31)	
	UGPA	11.99*	(1.18)	
	LSAT	1.32*	(0.05)	
	Asian/Pacific Islander	-5.35*	(1.31)	
	Black/African American	3.37	(1.53)	
	Hispanic/Latino	-1.04	(1.89)	
July 2016 (N = 4168)	Intercept	-132.48*	(6.21)	.611
	4-point LGPA	44.74*	(0.91)	
	UGPA	8.69*	(0.81)	
	LSAT	1.54*	(0.04)	
	Asian/Pacific Islander	-4.03*	(0.86)	
	Black/African American	-2.36	(1.08)	
	Hispanic/Latino	-1.62	(1.20)	
July 2017 (N = 3447)	Intercept	-113.45*	(6.83)	.590
	4-point LGPA	42.22*	(1.06)	
	UGPA	11.01*	(0.99)	
	LSAT	1.45*	(0.04)	
	Asian/Pacific Islander	-4.04*	(0.94)	
	Black/African American	-0.04	(1.23)	
	Hispanic/Latino	-1.34	(1.40)	

* Statistically significant; $p < 0.01$

Table 7.4.4 contains linear regression model results predicting bar exam scores from Index-based LGPA, UGPA, LSAT score, and race/ethnicity using the school-based sample. Index-based LGPA was a statistically significant predictor of bar exam scores and UGPA and LSAT score generally were not. The exception throughout this analysis has been a statistically significant negative regression coefficient for LSAT score in July 2015. In February, none of the racial/ethnic groups had statistically significant regression coefficients. In July, all of the racial/ethnic groups had statistically significant regression coefficients, indicating lower predicted scores on the bar exam compared to the Caucasian/White group. In other words, accounting for Index-based LGPA, UGPA, and LSAT score, there were statistically significant differences between Caucasian/White and each of the modeled racial/ethnic groups in July bar exam administrations before and after UBE adoption.

Table 7.4.4
Linear Regression Predicting Bar Exam Scores
Index-based LGPA, UGPA, LSAT, and Race/Ethnicity
School-based Sample

Administration	Variable	Model 4: LGPA, UGPA, LSAT, Black/African American		
		B	(SE)	R^2
February 2016 (N = 477)	Intercept	152.14*	(18.16)	.162
	Index-based LGPA	12.02*	(1.77)	
	UGPA	1.68	(2.18)	
	LSAT	-0.04	(0.14)	
	Asian/Pacific Islander	-4.93	(2.25)	
	Black/African American	-3.82	(2.34)	
	Hispanic/Latino	0.05	(2.96)	
February 2017 (N = 664)	Intercept	137.19*	(15.65)	.204
	Index-based LGPA	12.84*	(1.40)	
	UGPA	2.83	(1.79)	
	LSAT	-0.01	(0.12)	
	Asian/Pacific Islander	3.18	(1.93)	
	Black/African American	-1.43	(1.82)	
	Hispanic/Latino	2.05	(2.37)	
July 2015 (N = 1928)	Intercept	76.88*	(8.91)	.596
	Index-based LGPA	25.78*	(0.83)	
	UGPA	1.39	(1.34)	
	LSAT	-0.30*	(0.08)	
	Asian/Pacific Islander	-8.70*	(1.35)	
	Black/African American	-8.15*	(1.56)	
	Hispanic/Latino	-5.66*	(1.96)	
July 2016 (N = 4168)	Intercept	56.45*	(6.12)	.591
	Index-based LGPA	26.37*	(0.58)	
	UGPA	-2.15	(0.90)	
	LSAT	-0.10	(0.05)	
	Asian/Pacific Islander	-7.95*	(0.87)	
	Black/African American	-13.82*	(1.08)	
	Hispanic/Latino	-7.92*	(1.23)	
July 2017 (N = 3447)	Intercept	46.05*	(6.73)	.581
	Index-based LGPA	25.44*	(0.66)	
	UGPA	0.85	(1.09)	
	LSAT	-0.03	(0.06)	
	Asian/Pacific Islander	-7.17*	(0.94)	
	Black/African American	-9.96*	(1.22)	
	Hispanic/Latino	-7.22*	(1.40)	

* Statistically significant; $p < 0.01$

Table 7.4.5 lists the regressions including 4-point LGPA, UGPA, LSAT score, and gender for first-time takers in the school-based sample. The general pattern of results for July exams was similar to those observed earlier for the entire school-based sample, where 4-point LGPA, UGPA and LSAT score were statistically significant predictors of bar exam score and in July 2016, females had a statistically significant regression coefficient that predicted lower bar exam scores compared to males. We won't put much emphasis on the February results because of the relatively small sample sizes (84 and 92) but will mention that 4-point LGPA was the only statistically significant predictor of bar exam score. Based on the July models, females were predicted to score 2.49 points lower than males after UBE adoption in July 2016, but the difference did not persist the following July UBE administration in 2017.

Table 7.4.5
Linear Regression Predicting Bar Exam Scores
4-point LGPA, UGPA, LSAT, and Gender
First-time Taker School-based Sample

Administration	Variable	Model 3: LGPA, UGPA, LSAT, Gender		
		B	(SE)	R^2
February 2016 (N = 84)	Intercept	104.51	(42.90)	.198
	4-point LGPA	22.68*	(5.59)	
	UGPA	5.56	(3.98)	
	LSAT	0.36	(0.23)	
	Female	0.14	(3.23)	
February 2017 (N = 92)	Intercept	-94.45	(43.12)	.448
	4-point LGPA	22.27*	(6.48)	
	UGPA	8.97	(5.09)	
	LSAT	1.62	(0.26)	
	Female	7.33	(4.25)	
July 2015 (N = 1854)	Intercept	-112.93*	(8.58)	.605
	4-point LGPA	47.39*	(1.33)	
	UGPA	11.77*	(1.25)	
	LSAT	1.25*	(0.05)	
	Female	0.38	(0.86)	
July 2016 (N = 4042)	Intercept	-125.16*	(6.12)	.587
	4-point LGPA	45.34*	(0.91)	
	UGPA	9.19*	(0.83)	
	LSAT	1.48*	(0.04)	
	Female	-2.49*	(0.58)	
July 2017 (N = 3378)	Intercept	-91.54*	(6.89)	.533
	4-point LGPA	41.19*	(1.05)	
	UGPA	9.73*	(1.04)	
	LSAT	1.36*	(0.04)	
	Female	0.06	(0.67)	

* Statistically significant; p < 0.01

Table 7.4.6 contains linear regression models predicting bar exam scores using Index-based LGPA, UGPA, LSAT score, and gender for first-time takers in the school-based sample. The February sample sizes were small, so we wouldn't recommend putting much emphasis on the lack of statistically significant regression coefficients in February 2016. For July exams, Index-based LGPA was a statistically significant predictor of bar exam score along with the LSAT score in July 2015 which, similar to elsewhere, predicted a slight decrease in bar exam score as LSAT score increased. Females had a statistically significant regression coefficient in July 2016 only, with females having bar exam scores predicted to be lower than males. This difference was not observed during the following July UBE administration in 2017. Despite the statistically significant gender difference observed here, in section 8 we will see that the first-

time taker difference between females and males in July 2016 decreased when reviewing eventual pass rates for this group after additional attempts.

Table 7.4.6
Linear Regression Predicting Bar Exam Scores
Index-based LGPA, UGPA, LSAT, and Gender
First-time Taker School-based Sample

Administration	Variable	Model 3: LGPA, UGPA, LSAT, Gender		
		B	(SE)	R^2
February 2016 (N = 84)	Intercept	188.10*	(39.45)	.060
	Index-based LGPA	5.77	(3.66)	
	UGPA	3.46	(4.59)	
	LSAT	-0.04	(0.27)	
	Female	1.28	(3.51)	
February 2017 (N = 92)	Intercept	-22.30	(37.52)	.470
	Index-based LGPA	16.00*	(4.00)	
	UGPA	4.65	(5.21)	
	LSAT	0.73	(0.33)	
	Female	5.78	(4.22)	
July 2015 (N = 1854)	Intercept	67.36*	(9.05)	.548
	Index-based LGPA	26.91*	(0.91)	
	UGPA	1.48	(1.45)	
	LSAT	-0.32*	(0.08)	
	Female	0.40	(0.92)	
July 2016 (N = 4042)	Intercept	45.02*	(6.19)	.526
	Index-based LGPA	25.85*	(0.64)	
	UGPA	-0.30	(0.96)	
	LSAT	-0.04	(0.06)	
	Female	-3.10*	(0.62)	
July 2017 (N = 3378)	Intercept	47.13*	(6.77)	.499
	Index-based LGPA	24.88*	(0.72)	
	UGPA	0.73	(1.16)	
	LSAT	-0.01	(0.06)	
	Female	-0.10	(0.69)	

* Statistically significant; $p < 0.01$

Linear regression models predicting bar exam scores using 4-point LGPA, UGPA, LSAT score, and race/ethnicity for first-time takers in the school-based sample are included in Table 7.4.7. We will focus on the July results due to the relatively small sample sizes in February. For each July exam, 4-point LGPA, UGPA, and LSAT score were all statistically significant predictors of bar exam score. In addition, the Asian/Pacific Islander group was predicted to have statistically significantly lower scores than the Caucasian/White group for each July exam before and after UBE adoption. The Black/African American group was predicted to have statistically

significantly lower scores than the Caucasian/White group in July 2016. This was particularly interesting because in section 4.3, the Black/African American group had average bar exam scores that dipped slightly in July 2016 compared to other racial/ethnic groups (including the Caucasian/White group; see Figure 4.3.27) but recovered in July 2017. The regression model indicated that the dip in average bar exam scores for the Black/African American group was not explained entirely by differences in group performance on 4-point LGPA, UGPA, and LSAT score. Because the regression coefficient did not remain statistically significant in July 2017, it is unlikely that the difference was due to the UBE. Also, as we will see in Table 7.4.8, the LGPA used in the model affected the results.

Table 7.4.7
Linear Regression Predicting Bar Exam Scores
4-point LGPA, UGPA, LSAT, and Race/Ethnicity
First-time Taker School-based Sample

Administration	Variable	Model 4: LGPA, UGPA, LSAT, Black/African American		
		B	(SE)	R^2
February 2016 (N = 74)	Intercept	66.76	(51.70)	.248
	4-point LGPA	27.71*	(6.46)	
	UGPA	4.63	(4.28)	
	LSAT	0.52	(0.27)	
	Asian/Pacific Islander	0.56	(4.72)	
	Black/African American	1.86	(4.80)	
	Hispanic/Latino	4.55	(6.76)	
February 2017 (N = 88)	Intercept	-95.07	(46.91)	.463
	4-point LGPA	24.57*	(7.03)	
	UGPA	10.78	(5.19)	
	LSAT	1.54*	(0.26)	
	Asian/Pacific Islander	8.14	(5.64)	
	Black/African American	4.68	(6.60)	
	Hispanic/Latino	13.25	(7.67)	
July 2015 (N = 1739)	Intercept	-116.12*	(9.32)	.608
	4-point LGPA	46.50*	(1.41)	
	UGPA	11.81*	(1.27)	
	LSAT	1.30*	(0.06)	
	Asian/Pacific Islander	-5.10*	(1.36)	
	Black/African American	3.96	(1.65)	
	Hispanic/Latino	-1.10	(2.07)	
July 2016 (N = 3770)	Intercept	-120.34*	(6.64)	.587
	4-point LGPA	43.93*	(0.97)	
	UGPA	8.29*	(0.86)	
	LSAT	1.50*	(0.04)	
	Asian/Pacific Islander	-4.30*	(0.89)	
	Black/African American	-4.04*	(1.15)	
	Hispanic/Latino	-2.66	(1.24)	
July 2017 (N = 3127)	Intercept	-95.74*	(7.45)	.538
	4-point LGPA	40.58*	(1.13)	
	UGPA	9.99*	(1.07)	
	LSAT	1.40*	(0.05)	
	Asian/Pacific Islander	-3.52*	(0.98)	
	Black/African American	0.15	(1.34)	
	Hispanic/Latino	-1.50	(1.48)	

* Statistically significant; $p < 0.01$

Table 7.4.8 lists regression model results predicting bar exam scores using Index-based LGPA, UGPA, LSAT score, and race/ethnicity for first-time takers in the school-based sample. Similar to the other first-time taker results, we did not describe the February results due to the small sample sizes. For each July exam, Index-based LGPA was a statistically significant predictor of bar exam score. Similar to elsewhere, UGPA and LSAT score were not statistically significant predictors of bar exam score when the model included Index-based LGPA, except for July 2015, where the LSAT score had a statistically significant negative regression coefficient (-0.35). Finally, Asian/Pacific Islander, Black/African American, and Hispanic/Latino groups had statistically significant regression coefficients at each July bar exam before and after UBE, indicating that after accounting for Index-based LGPA, UGPA, and LSAT score, each of these groups were predicted to score statistically significantly lower than the Caucasian/White group on the bar exam. Appendix O provides additional analysis of groups after statistically accounting for background characteristics and shows that accounting for background characteristics explains a portion of the differences in mean bar exam performance across racial/ethnic groups but did not eliminate the differences. Remaining differences were statistically meaningful but relatively small in magnitude (e.g., Table O.15 and Figure O.3). The available data do not provide additional explanation of these residual differences in bar exam performance across groups after accounting for background characteristics, but indicate that some other variable (or variables) were contributing to a portion of the remaining differences across groups. For example, it may be that additional candidate background characteristics, educational experiences, or other variables would explain additional portions of the differences observed across racial/ethnic groups. Because (a) Index-based LGPA showed differences for all groups at each July exam and (b) 4-point LGPA showed differences only for the Asian/Pacific Islander group at each July exam and for the Black/African American group in July 2016, there may be some law school related characteristics that would help explain the patterns of performance observed in the regression models across groups when using different ways of scaling LGPAs to account for law school selectivity (Index-based LGPA) or not (4-point LGPA).

Table 7.4.8
Linear Regression Predicting Bar Exam Scores
Index-based LGPA, UGPA, LSAT, and Race/Ethnicity
First-time Taker School-based Sample

Administration	Variable	Model 4: LGPA, UGPA, LSAT, Black/African American		
		B	(SE)	R^2
February 2016 (N = 74)	Intercept	193.52*	(45.25)	.080
	Index-based LGPA	6.73	(4.05)	
	UGPA	1.91	(5.01)	
	LSAT	-0.09	(0.32)	
	Asian/Pacific Islander	-3.24	(5.13)	
	Black/African American	-4.35	(5.15)	
	Hispanic/Latino	0.67	(7.51)	
February 2017 (N = 88)	Intercept	-13.83	(38.01)	.499
	Index-based LGPA	17.22*	(3.96)	
	UGPA	5.63	(5.27)	
	LSAT	0.59	(0.31)	
	Asian/Pacific Islander	6.64	(5.39)	
	Black/African American	0.13	(6.18)	
	Hispanic/Latino	11.41	(7.40)	
July 2015 (N = 1739)	Intercept	79.56*	(9.45)	.566
	Index-based LGPA	26.49*	(0.93)	
	UGPA	1.05	(1.45)	
	LSAT	-0.35*	(0.09)	
	Asian/Pacific Islander	-8.73*	(1.41)	
	Black/African American	-8.17*	(1.71)	
	Hispanic/Latino	-6.45*	(2.17)	
July 2016 (N = 3770)	Intercept	60.49*	(6.40)	.556
	Index-based LGPA	25.93*	(0.64)	
	UGPA	-1.86	(0.96)	
	LSAT	-0.10	(0.06)	
	Asian/Pacific Islander	-8.46*	(0.91)	
	Black/African American	-15.43*	(1.17)	
	Hispanic/Latino	-8.96*	(1.28)	
July 2017 (N = 3127)	Intercept	54.00*	(7.14)	.521
	Index-based LGPA	24.59*	(0.73)	
	UGPA	0.77	(1.17)	
	LSAT	-0.02	(0.06)	
	Asian/Pacific Islander	-6.92*	(0.99)	
	Black/African American	-10.07*	(1.34)	
	Hispanic/Latino	-7.40*	(1.50)	

* Statistically significant; $p < 0.01$

7.5 Summary

In this section, we explored linear regression models to more explicitly study the extent to which background characteristics were statistically significant predictors of bar exam scores. One of the general observations based on models above that included the school-based sample or first-time takers in the school based sample, was that choice of LGPA mattered. Using the 4-point LGPA, which rescaled LGPAs to have a similar mean and standard deviation across schools and did not account for school selectivity, led to UGPA and LSAT score contributing to predicting bar exam scores in a statistically meaningful way. Using the Index-based LGPA, which scaled LGPAs to a combination of UGPA and LGPA at each school to account for school selectivity, led to UGPA and LSAT score not predicting bar exam scores with the exception of July 2015, where LSAT score was statistically significant but with a small and negative regression coefficient. The general picture from the models including Index-based LGPA was that school-level effects of UGPA and LSAT score included in the Index-based LGPA captured the useful (positive) predictive value from UGPA and LSAT score. Regardless of which LGPA was included in the model, LGPA was always the best predictor of bar exam scores.

We also explored the extent to which gender or race/ethnicity showed statistically different performance after accounting for LGPA, LSAT score, and UGPA. In general, for the July exams (a) females were predicted to have lower bar exam scores than males in July 2016 when the model included 4-point LGPA or Index-based LGPA, (b) the Asian/Pacific Islander group was predicted to have statistically significantly lower bar exam scores than the Caucasian/White group across exams before and after UBE adoption for the models including 4-point LGPA, (c) the Black/African American group was predicted to have statistically significantly lower bar exam scores than the Caucasian/White group in July 2016 when the model included 4-point LGPA and was based on the sample of first-time takers in the school-based sample, and (d) the Asian/Pacific Islander, Black/African American, and Hispanic/Latino groups were each predicted to have statistically significantly lower bar exam scores at each July exam (before and after UBE adoption) when including Index-based LGPA in the model. While statistically meaningful differences were observed across groups, the magnitude of these differences were small compared to the much larger effects of LGPAs (4-point or Index-based) on bar exam scores.

Whether or not LGPA accounted for school-level selectivity led to different regression results when estimating models that included LGPA, UGPA, LSAT score and gender or racial/ethnic groups. 4-point LGPA allowed UGPA and LSAT score to play more of a role in the regression model as a stand-alone variable compared to the Index-based LGPA, which incorporated school-level UGPA and LSAT score effects into LGPA itself. This may explain why each racial/ethnic group was different when modeling under Index-based LGPA and Asian/Pacific Islander tended to differ under 4-point LGPA. For example, modeling with 4-point LGPA may have allowed UGPA and LSAT score to be incorporated into the model with more

fidelity. Regardless of the explanation, differences across gender and race/ethnicity tended to apply consistently before and after UBE adoption with two exceptions in July 2016. First, when the model included 4-point LGPA or Index-based LGPA, females were predicted to score lower on the bar exam compared to males in July 2016. Second, when the model included 4-point LGPA, the Black/African American first-time takers were predicted to score lower on the bar exam compared to the Caucasian/White group in July 2016. It is not clear why these differences were observed in July 2016 only, but because (a) the differences across groups did not continue to exist in July 2017 and (b) the observed differences across groups depended on how LGPA was scaled, it suggests that the UBE is likely not the explanation.

The results of this section were generally consistent with results observed elsewhere in this study. The results here took a more sophisticated modeling approach to study background characteristics by statistically controlling for the effects of background characteristics and reviewing potential group differences in bar exam scores. Models provided some interesting results that might not have been gleaned reviewing tables and figures of average scores alone. However, the results here did not indicate that UBE led to dramatic or sustained differences in prediction or across groups before UBE adoption in July 2015 and after UBE adoption in July 2016 and July 2017.[68]

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[68] We did not emphasize February results due to limitations in the February data described throughout this study. Appendix O provides additional technical analysis using a different set of models.

8. What are the Eventual Pass Rates for Candidates Taking the New York Bar Exam Before and After UBE Adoption?

8.1 Overview

This section addresses the question *what are the eventual pass rates for candidates taking the New York bar exam before and after UBE adoption?* Cumulative percentage of candidates passing the bar exam at each subsequent bar exam after a first attempt are presented for bar exams between July 2015 and July 2017 (section 8.3). These cumulative, or eventual, pass rates were studied for all first-time taking and all domestic-educated first-time taking candidates in the New York State Board of Law Examiners (NYSBLE) sample. In addition, eventual pass rates were broken down by gender and race/ethnicity for the July 2015 and July 2016 bar exams to review the trends in eventual pass rates for candidates taking the exam for the first-time before and after UBE adoption.

In addition to eventual pass rates, candidate persistence rates were reviewed for first-time takers and domestic-educated first-time takers in the NYSBLE sample to study the percentage of candidates that continued to attempt the bar exam after not passing after their first attempt (section 8.2). Breakdowns by gender and race/ethnicity were provided to review persistence across groups.

8.2 Persistence Rates of Candidates Not Passing after a First Attempt

Table 8.2.1 presents for candidates not passing the bar exam during their first attempt in New York at a particular administration the cumulative percentage of candidates retaking at a subsequent bar exam. Each row in the table lists the bar exam when candidates first attempted the bar exam in New York.[69] In addition, the first column with numbers includes the number and percentage of first-time takers not passing and the last column lists the unique number of candidates retaking the exam as of July 2017. The four columns in the middle of the table represent the persistence rates at each subsequent bar exam (i.e., the percentage retaking as of the exam listed in the column). There are missing values in the table because persistence rates begin at the bar exam administration after the one represented by each row of the table. For example, for the July 2016 row, the February 2016 and July 2016 columns are missing because this group took the exam in New York for the first time in July 2016.

Starting with the July 2015 row of Table 8.2.1, there were 2,542 out of 8,587 first-time taking candidates in July 2015, or 29.6%, who did not pass. Of those 2,542, there were 59.1% who retook the exam in February 2016, 66.6% retook the exam as of July 2016, 68.8% retook

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[69] It is important to note that first-time takers include only New York candidates testing in New York. It is possible that some candidates took the bar exam in another jurisdiction previously or subsequently. Any bar exam attempts outside of New York were not included here.

the exam as of February 2017, and 70.5% retook the exam as of July 2017. Notice that the percentage retaking increases at each subsequent exam following July 2015 because the percentage represents the cumulative persistence rate, such that the July 2017 persistence rate adds up the total number of first-time taking candidates who did not pass in July 2015 but attempted again between February 2016 and July 2017 (this number, 1,791, is listed in the last column). Skipping to the July 2016 row, 26.6% of first-time takers did not pass in July 2016. Of these 2,207, 58.7% retook the exam in February 2017 and 67.2% retook the exam as of July 2017. If we compare the two July administrations, despite a slightly larger percentage of first-time taking candidates not passing in July 2015 compared to July 2016, those retaking the exam at the subsequent two available bar exams were not that different (59.1% versus 58.7% and 66.6% versus 64.4%). In other words, persistence rates did not appear to differ much before and after UBE adoption.[70]

February exams were included in the table but were less helpful to compare because February 2017 could only include one subsequent exam (July 2017) when calculating persistence rate. The persistence rate at the first subsequent exam was 58.6% for the February 2017 group and 52.5% for February 2016. July 2017 was included as a row in in Table 8.2.1 to provide the percentage not passing (21.6%; the lowest of the three Julys) but data was not available for subsequent exams to study persistence for the July 2017 group.

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[70] Note that persistence starting in July 2015 included UBE administrations starting in July 2016.

Table 8.2.1
Percentage Eventually Retaking
First-Time Taker Candidates* Not Passing
New York State Board of Law Examiners Sample

	(% not passing) Number not passing/Total	Cumulative % not passing that retake				Unique N retaking
		Feb. 2016	July 2016	Feb. 2017	July 2017	
July 2015	(29.6%) 2542/8587	59.1%	66.6%	68.8%	70.5%	1791
February 2016	(45.4%), 592/1303	--	52.5%	64.4%	68.6%	406
July 2016	(26.6%) 2207/8297	--	--	58.7%	67.2%	1484
February 2017	(38.7%) 563/1454	--	--	--	58.6%	330
July 2017	(21.6%) 1688/7815	--	--	--	--	--

* Includes domestic- and foreign-educated candidates.

Table 8.2.2 contains persistence rates for domestic-educated first-time takers not passing the bar exam. Persistence was higher than those for all first-time takers in Table 8.2.1 but the patterns were generally similar. Specifically, persistence rates before and after UBE adoption were similar (69.0% to 76.7% for July 2015 first-time takers and 70.3% to 75.9% for July 2016 first-time takers), although the July 2016 group didn't see as large an increase in persistence at the second retake opportunity (an increase of 5.6 percentage points) compared to July 2015 (an increase of 7.7 percentage points).

Table 8.2.2
Percentage Eventually Retaking
Domestic-Educated First-Time Taker Candidates Not Passing
New York State Board of Law Examiners Sample

	(% not passing), Number not passing/Total	Cumulative % not passing that retake				Unique N retaking
		Feb. 2016	July 2016	Feb. 2017	July 2017	
July 2015	(20.7%) 1352/6536	69.0%	76.7%	78.6%	79.7%	1077
February 2016	(32.9%) 264/803	--	58.7%	68.9%	72.0%	190
July 2016	(17.3%) 1076/6234	--	--	70.3%	75.9%	871
February 2017	(29.5%) 267/905	--	--	--	62.5%	167
July 2017	(14.0%) 804/5742	--	--	--	--	--

Because July 2015 and July 2016 covered at least two subsequent opportunities to retake the exam and because these two administrations cover the bar exams just prior to and just after UBE adoption, the next several tables only include persistence rates for gender and racial/ethnic groups taking July 2015 and July 2016 exams for the first-time.

Table 8.2.3 lists persistence rates by gender for candidates taking the bar exam in New York for the first-time in July 2015 or July 2016 and not passing. Persistence rates for males were somewhat higher for July 2015 first-time takers compared to females and persistence rates for females were higher than males for July 2016 first-time takers. The persistence rates for females in July 2016 were also higher than the persistence rates for females at the first two opportunities to retake the exam for the July 2015 group. A higher percentage of females did not pass in July 2015 and July 2016 compared to males, but the difference in percentages not passing across groups was somewhat larger in July 2016 (6.9 percentage points) compared to July 2015 (9 percentage points). It is encouraging that the persistence rates for females in July 2016 were higher than July 2015; a larger percentage of the group of females not passing retook the exam. In the next section, we will see that this persistence likely contributed to the difference in pass rates between males and females shrinking across attempts.

Table 8.2.3
Percentage Eventually Retaking by Gender
First-Time Taker Candidates* Not Passing
New York State Board of Law Examiners Sample

		(% not passing) Number not passing/Total	Cumulative % not passing that retake				Unique N retaking
			Feb. 2016	July 2016	Feb. 2017	July 2017	
July 2015	Female	(32.9%) 1434/4362	59.0%	66.0%	68.4%	69.9%	1002
	Male	(26.0%) 1050/4037	59.6%	67.8%	69.7%	71.4%	750
July 2016	Female	(31.0%) 1332/4296	--	--	60.9%	69.7%	928
	Male	(22.0%) 854/3883	--	--	55.7%	63.9%	546

* Includes domestic- and foreign-educated candidates.

Table 8.2.4 lists persistence rates for domestic-educated first-time takers for July 2015 and July 2016 by gender. The percentage not passing was lower than the first-time taker group (Table 8.2.3) and the persistence rates were higher. Persistence rates were higher for females in July 2015 and July 2016 compared to males. Persistence rates for the first two retake opportunities were higher for July 2016 females than for July 2015 females and July 2016 males had lower persistence rates after two subsequent bar exams compared to July 2015 males. Again, the persistence rates for females were encouraging because they tended to have higher percentages not passing on the first attempt, which indicated that of those not passing, a larger percentage persisted compared to males.

Table 8.2.4
Percentage Eventually Retaking by Gender
Domestic-Educated First-Time Taker Candidates Not Passing
New York State Board of Law Examiners Sample

		(% not passing) Number not passing/Total	Cumulative % not passing that retake				Unique N retaking
			Feb. 2016	July 2016	Feb. 2017	July 2017	
July 2015	Female	(21.9%) 689/3143	70.0%	76.9%	79.2%	80.3%	553
	Male	(19.5%) 635/3253	68.0%	76.7%	78.1%	79.1%	502
July 2016	Female	(20.1%) 622/3093	--	--	72.5%	78.1%	486
	Male	(14.6%) 433/3044	--	--	68.2%	73.8%	327

Table 8.2.5 contains persistence rates for first-time takers in July 2015 and July 2016 by race/ethnicity. For July 2015 first-time takers not passing, the Black/African American group had the highest persistence rates (65.9%, 74.0%, 76.7%, and 78.3%), followed by the Caucasian/White group (64.6%, 72.5%, 74.3%, and 75.5%), then the Hispanic/Latino group (59.7%, 67.6%, 69.9%, and 70.5%), and the Asian/Pacific Islander group (51.8%, 59.0%, 61.7%, and 63.7%). For July 2016 first-time takers not passing, the Black/African American group and Caucasian/White group persistence rates were the same in February 2017 (66.2%) but the Black/African American group had a persistence rate of 74.1% in July 2017 compared to 73.1% for the Caucasian/White group. Persistence rates for (a) the Hispanic/Latino group were 60.9% and 66.5% and (b) the Asian/Pacific Islander group were 48.4% and 59.0%. The Black/African American group tended to have higher persistence rates, particularly at the second retake opportunity, compared to other groups.

Table 8.2.5
Percentage Eventually Retaking by Race/Ethnicity
First-Time Taker Candidates* Not Passing
New York State Board of Law Examiners Sample

		(% not passing) Number not passing/Total	Cumulative % not passing that retake				Unique N retaking
			Feb. 2016	July 2016	Feb. 2017	July 2017	
July 2015	Caucasian/White	(18.4%) 874/4755	64.6%	72.5%	74.3%	75.5%	660
	Asian/Pacific Islander	(46.9%) 930/1983	51.8%	59.0%	61.7%	63.7%	592
	Black/African American	(46.0%) 258/561	65.9%	74.0%	76.7%	78.3%	202
	Hispanic/Latino	(41.0%) 176/429	59.7%	67.6%	69.9%	70.5%	124
July 2016	Caucasian/White	(16.6%) 751/4511	--	--	66.2%	73.1%	549
	Asian/Pacific Islander	(40.7%) 797/1960	--	--	48.4%	59.0%	470
	Black/African American	(47.5%) 266/560	--	--	66.2%	74.1%	197
	Hispanic/Latino	(36.1%) 179/496	--	--	60.9%	66.5%	119

* Includes domestic- and foreign-educated candidates.

Table 8.2.6 contains persistence rates for domestic-educated first-time takers for July 2015 and July 2016 by race/ethnicity. Patterns of persistence across groups were not consistent. For July 2015 first-time takers not passing, the Black/African American group started out with the highest persistence rate (71.4%) and the Asian/Pacific Islander and Black/African American groups had the highest persistence rates at the July 2017 exam (82.8%). For July 2016 first-time takers not passing, the Hispanic/Latino group had the highest persistence rate to start (72.2%) and the Asian/Pacific Islander group had the highest persistence rate at the July 2017 exam (80.2%). Despite these patterns, persistence rates were quite high across groups and did not fluctuate a lot among domestic-educated first-time taking candidates by race/ethnicity before and after UBE adoption after two subsequent bar exams.

Table 8.2.6
Percentage Eventually Retaking by Race/Ethnicity
Domestic-Educated First-Time Taker Candidates Not Passing
New York State Board of Law Examiners Sample

		Cumulative % not passing that retake				
	(% not passing) Number not passing/Total	Feb. 2016	July 2016	Feb. 2017	July 2017	Unique N retaking
July 2015	Caucasian/White	(14.9%) 632/4229	68.4%	75.6%	77.2%	78.2%	494
	Asian/Pacific Islander	(27.0%) 239/884	67.8%	79.1%	80.8%	82.8%	198
	Black/African American	(41.4%) 203/490	71.4%	78.8%	81.8%	82.8%	168
	Hispanic/Latino	(34.4%) 103/299	68.0%	74.8%	77.7%	77.7%	80
July 2016	Caucasian/White	(12.5%) 488/3895	--	--	70.3%	74.2%	362
	Asian/Pacific Islander	(18.6%) 167/898	--	--	70.7%	80.2%	134
	Black/African American	(42.2%) 204/483	--	--	70.1%	76.0%	155
	Hispanic/Latino	(27.0%) 97/359	--	--	72.2%	76.3%	74

8.3 Cumulative Pass Rates of Candidates Not Passing after a First Attempt

This section includes cumulative, or eventual, pass rates for candidates taking the bar exam for the first-time in New York at bar exams between July 2015 and July 2017. In addition to the entire group, results are presented for domestic-educated candidates and broken down by gender and race/ethnicity.

Table 8.3.1 contains cumulative pass rates for all candidates taking the bar exam for the first time at particular bar exam administrations in New York. Each row contains an exam where candidates were first-time takers. Columns contain the cumulative percentages of candidates passing at each subsequent bar exam administration in New York. The last column contains the number of first-time takers in each group. The cumulative pass rates increase from left to right as first-time taking candidates have additional opportunities to retake the bar exam and additional candidates pass. For example, for July 2015 first-time takers row in the table, the initial pass rate was 70.4% in July 2015 and increased to 83.8% as of July 2017 after four opportunities to retake the exam. Similarly, for July 2016 first-time takers, the initial pass rate was 73.4% and increased to 83.5% as of July 2017 after two opportunities to retake the exam.

Figure 8.3.1 presents the cumulative pass rates for each group of first-time taking candidates across the initial (0) and number of bar exam administrations after the first attempt (1, 2, 3, and 4). Each curve represents a group of first-time takers from a specific bar exam administration and the points within each curve represent a bar exam administration. For example, the solid blue curve represents first-time takers in July 2015. The point at 0 "Number of Administrations after First Attempt" is the pass rate in July 2015. The point at 1 is the pass rate in February 2016 and so on. The green short-long dashed curve represents first-time takers in July 2016 with point 0 containing the pass rate in July 2016, point 1 containing the pass rate in February 2017, and point 2 containing the pass rate in July 2017. Notice that the July 2016 curve stops after three points because data was not available after July 2017. The advantage of this figure compared to Table 8.3.1 is that the initial and subsequent attempts for each group are lined up in a way that allow for easier comparisons across the initial bar exam attempt and subsequent opportunities to retake the exam. The curves can be compared to determine how pass rates change at subsequent retake opportunities across groups.

For example, after UBE adoption (July 2016 group), eventual pass rates had a slightly smaller increase in pass rates after three bar exams compared to before UBE adoption (July 2015 group), although the starting pass rate was higher. The starting pass rate for first-time takers in July 2016 was 73.4% compared to 70.4% for first-time takers in July 2015. For the next two bar administrations for July 2016 first-time takers, pass rates increased 7.2 and 2.9 percentage points

(from 73.4% to 80.6% to 83.5%) and for July 2015 first-time takers, pass rates increased 8.0 and 2.5 percentage points (from 70.4% to 78.4% to 80.9%).
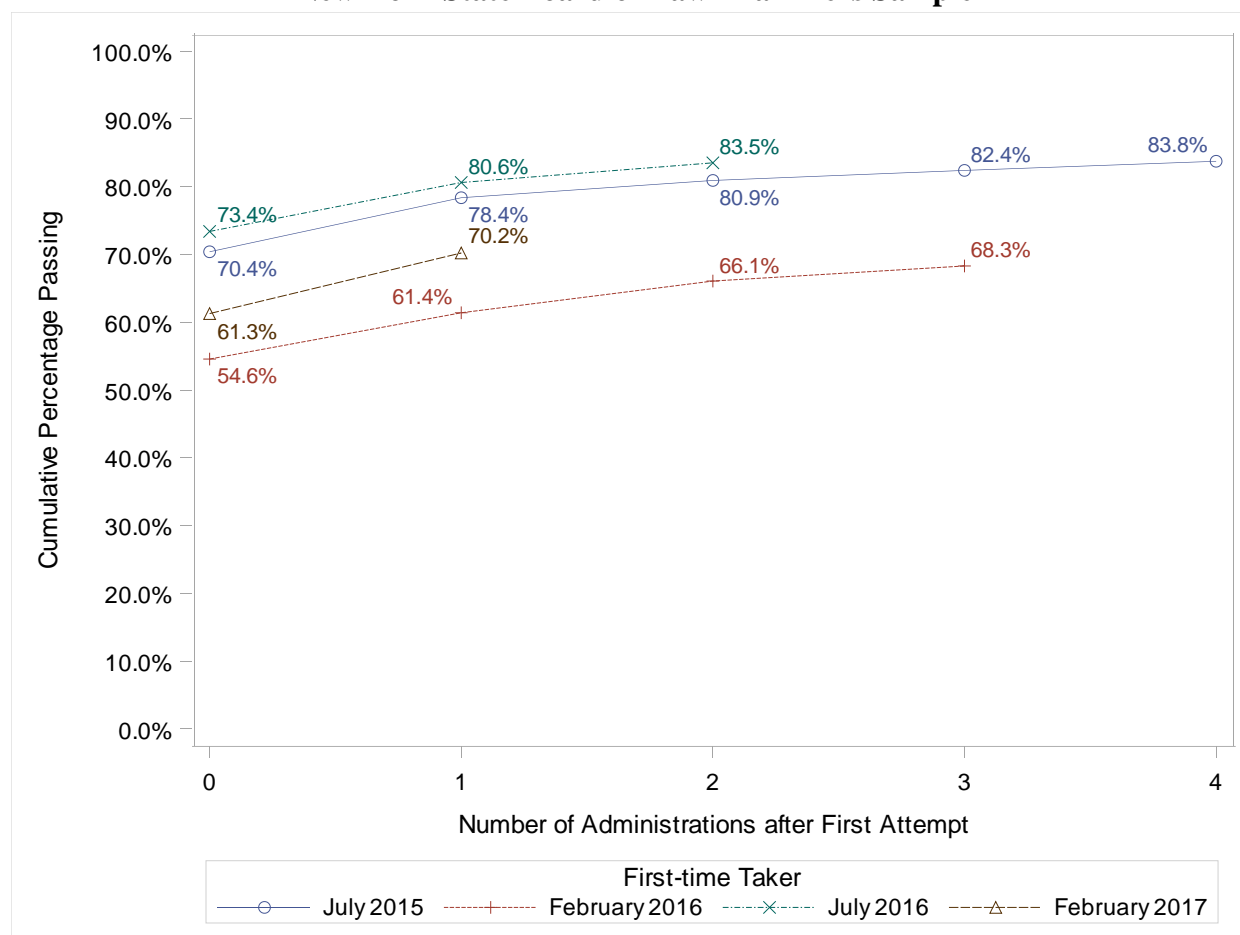
Eventual pass rates for first-time takers in the February 2017 bar exam immediately after UBE adoption showed a larger increase in pass rates after two bar exams compared to before UBE adoption, in addition to having a higher starting pass rate. The starting pass rate for first-time takers in February 2016 was 54.6% compared to 61.3% for first-time takers in February 2017. The change in bar pass rate for February 2017 first-time takers between February 2017 and July 2017 was 8.9 percentage points. The change in bar pass rate for February 2016 first-time takers between February 2016 and July 2016 was 6.8 percentage points.

Table 8.3.1
Cumulative Pass Rates
First-Time Taker Candidates*
New York State Board of Law Examiners Sample

First-time Taker	Cumulative Passing Percentage					N
	July 2015	February 2016	July 2016	February 2017	July 2017	
July 2015	70.4%	78.4%	80.9%	82.4%	83.8%	8587
February 2016	--	54.6%	61.4%	66.1%	68.3%	1303
July 2016	--	--	73.4%	80.6%	83.5%	8297
February 2017	--	--	--	61.3%	70.2%	1454
July 2017	--	--	--	--	78.4%	7815

* Includes domestic- and foreign-educated candidates.

Figure 8.3.1
Cumulative Pass Rates
First-Time Taker Candidates*
New York State Board of Law Examiners Sample

* Includes domestic- and foreign-educated candidates.

Table 8.3.2 and Figure 8.3.2 contain cumulative pass rates for domestic-educated first-time takers in the NYSBLE sample. Pass rates were higher than those of the entire group of first-time takers (which included domestic- and foreign-educated candidates) but the patterns were similar. July 2016 eventual pass rates had slightly smaller increases in pass rates after three bar exams compared to July 2015, although the starting pass rate was higher. The starting pass rate for first-time takers in July 2016 was 82.7% compared to 79.3% for first-time takers in July 2015. For the next two bar administrations for July 2016 first-time takers, pass rates increased 6.2 and 2.2 percentage points (from 82.7% to 88.9% to 91.1%) and for July 2015 first-time takers, pass rates increased 7.2 and 2.5 percentage points (from 79.3% to 86.5% to 89.0%). Eventual pass rates we quite high for domestic-educated first-time takers in July, with pass rates near or above 90% after a couple of opportunities to retake the bar exam. Eventual pass rates for first-time takers in the February 2017 bar exam showed a larger increase in pass rates after two

bar exams compared to February 2016, in addition to having a higher starting pass rate. The starting pass rate for first-time takers in February 2017 was 70.5% compared to 67.1% for first-time takers in February 2016. The change in bar pass rate for February 2016 first-time takers between February 2016 and February 2017 was 8.9 percentage points. The change in bar pass rate for February 2016 first-time takers between February 2016 and February 2017 was 6.8 percentage points.

Table 8.3.2
Cumulative Pass Rates
Domestic-Educated First-Time Taker Candidates
New York State Board of Law Examiners Sample

First-time Taker	Cumulative Passing Percentage					N
	July 2015	February 2016	July 2016	February 2017	July 2017	
July 2015	79.3%	86.5%	89.0%	90.3%	91.1%	6536
February 2016	--	67.1%	73.8%	77.5%	79.0%	803
July 2016	--	--	82.7%	88.9%	91.1%	6234
February 2017	--	--	--	70.5%	78.9%	905
July 2017	--	--	--	--	86.0%	5742

Figure 8.3.2
Cumulative Pass Rates
Domestic-Educated First-Time Taker Candidates
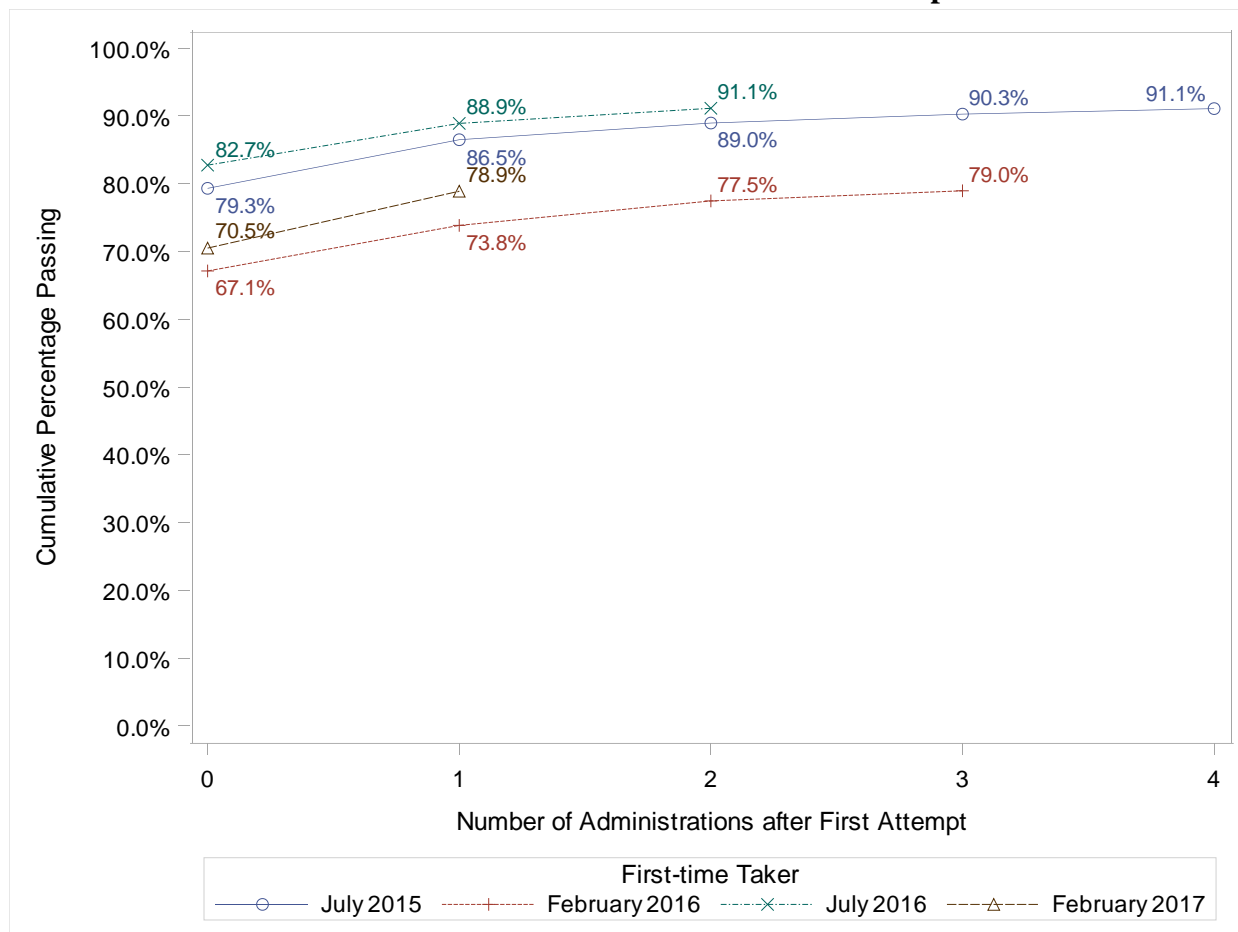**New York State Board of Law Examiners Sample**

Table 8.3.3 and Figure 8.3.3 list pass rates by gender for first-time takers in July 2015 and first-time takers in July 2016, immediately before and immediately after UBE adoption. Februarys were not included because the available data was limited to a single retake opportunity for the February 2017 candidates and therefore was less informative. Figure 8.3.3 illustrates that (a) cumulative pass rates increased most between the first attempt and first opportunity to retake the exam (8.4 or 7.6 percentage point increases for July 2015 first-time takers and 8.6 or 5.9 percentage point increases for July 2016 first-time takers across females and males) and (b) the differences in cumulative pass rates between females and males decreased after several opportunities to retake the bar exam. The difference between females and males decreased more rapidly for July 2016 first-time takers (a 9 percentage point difference decreased to 4.8 percentage points) compared to July 2015 first-time takers (a 6.9 percentage point difference decreased to 6 percentage points) at the third attempt, although the July 2016 group started with a larger difference between females and males. In section 4, we observed that July 2016 pass rate

differences between females and males tended to be larger than July 2015 or July 2017, but it appears that despite the larger difference in initial pass rates observed in July 2016, the difference narrowed when considering eventual pass rates. Figure 8.3.3 illustrates that the eventual pass rates between females and males began to converge with additional attempts for those taking the test in New York for the first time in July 2016 after UBE adoption.

Table 8.3.3
Cumulative Pass Rates by Gender
First-Time Taker Candidates*
New York State Board of Law Examiners Sample

First-time Taker		Cumulative Passing Percentage					N
		July 2015	February 2016	July 2016	February 2017	July 2017	
July 2015	Female	67.1%	75.5%	78.1%	79.8%	81.4%	4362
	Male	74.0%	81.6%	84.1%	85.4%	86.4%	4037
July 2016	Female	--	--	69.0%	77.6%	81.2%	4296
	Male	--	--	78.0%	83.9%	86.0%	3883

* Includes domestic- and foreign-educated candidates.

Figure 8.3.3
Cumulative Pass Rates by Gender
First-Time Taker Candidates*
New York State Board of Law Examiners Sample
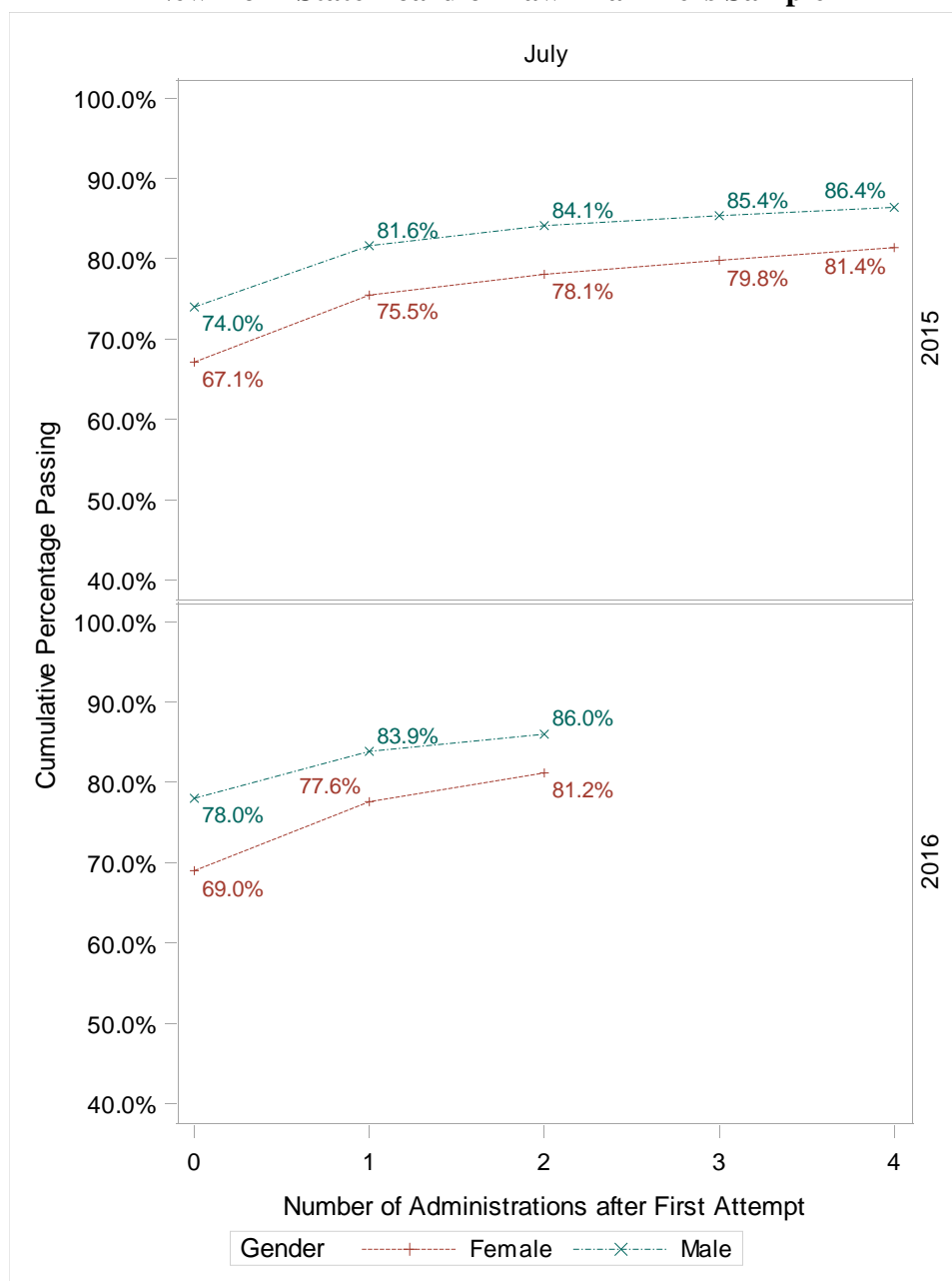
* Includes domestic- and foreign-educated candidates.

Table 8.3.4 and Figure 8.3.4 contain the cumulative pass rates by gender for domestic-educated first-time takers in July 2015 and July 2016. Compared to all first-time takers, the differences between female and male pass rates is smaller for domestic-educated candidates. Similar to all first-time takers, domestic-educated first-time takers had (a) cumulative pass rates that increased most between the first attempt and first opportunity to retake the exam and (b) differences in cumulative pass rates between females and males decreased after several opportunities to retake the bar exam. The difference between females and males decreased more rapidly for July 2016 first-time takers (a 5.5 percentage point difference decreased to 3 percentage points) compared to July 2015 first-time takers (a 2.4 percentage point difference decreased to 1.9 percentage points at the third attempt), although the July 2016 group started with larger differences between females and males.[71] The larger difference in first-time taker pass rate at first-attempt for the July 2016 group was clearly visible in Figure 8.3.4, which illustrates that the eventual pass rates between females and males began to converge with additional attempts for those taking the test in New York for the first time in July 2016 after UBE adoption.

Table 8.3.4
Cumulative Pass Rates by Gender
Domestic-Educated First-Time Taker Candidates
New York State Board of Law Examiners Sample

First-time Taker		Cumulative Passing Percentage					N
		July 2015	February 2016	July 2016	February 2017	July 2017	
July 2015	Female	78.1%	85.5%	88.1%	89.7%	90.6%	3143
	Male	80.5%	87.4%	89.8%	90.8%	91.6%	3253
July 2016	Female	--	--	79.9%	87.4%	90.2%	3093
	Male	--	--	85.4%	90.4%	92.0%	3044

[71] In section 4, a relative dip in pass rates in July 2016 was noted compared to July 2015 and July 2017, so the improvement in eventual pass rates is encouraging but may be due in part to the somewhat lower first-time pass rate for females in July 2016.

Figure 8.3.4
Cumulative Pass Rates by Gender
Domestic-Educated First-Time Taker Candidates
New York State Board of Law Examiners Sample
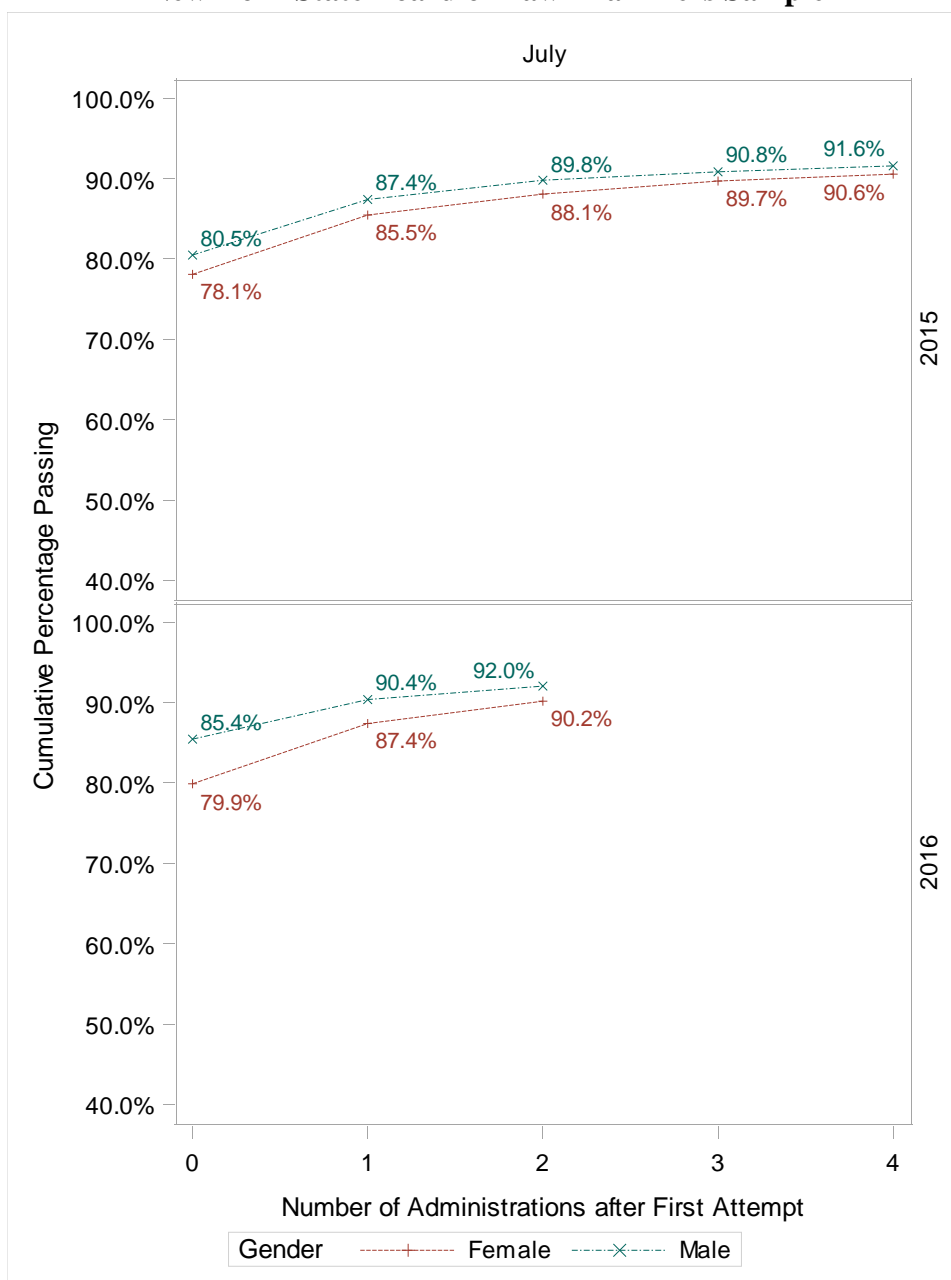
Returning to all first-time takers in July 2015 and July 2016, Table 8.3.5 contains pass rates by race/ethnicity in the NYSBLE sample at first and subsequent bar exam attempts. Pass rates increased most between the first attempt and second attempt for each racial/ethnic group (see Figure 8.3.5). Cumulative pass rates increased between 6.4 and 11.6 percentage points for July 2015 first-time takers and between 5.6 and 12.7 percentage points for July 2016 first-time takers at the second attempt in New York by racial/ethnic group. In addition, differences in eventual pass rates between the (a) Caucasian/White group and (b) Hispanic/Latino, Asian/Pacific-Islander, and Black/African American groups narrowed at each subsequent retake of the bar exam. The Black/African American group in particular saw steeper improvements in eventual pass rates compared to other groups. Pass rate differences for the Black/African American group compared to the Caucasian/White group was 27.6 percentage points for July 2015 first-time takers and 30.9 percentage points for July 2016 first-time takers. These differences decreased to 19.1 percentage points and 20.1 percentage points, respectively, after two additional bar exam administrations. As was observed in section 4, first-time taker pass rates at first attempt were relatively lower for Black/African American candidates in July 2016 compared to July 2015, and other groups had higher pass rates in July 2016 compared to July 2015. So, pass rates improved more rapidly for the Black/African American group, with eventual pass rate after two additional bar exam administrations for July 2016 first-time takers (70.9%) slightly higher than pass rates for July 2015 first-time takers after two bar exam administrations (70.8%). Eventual pass rates for first-time takers in July 2016 for other groups tended to be at least a couple of percentage points higher compared to eventual pass rates for July 2015 first-time takers, so the African/American eventual pass rate did not overcome the initially lower starting first-time taker pass rate in July 2016. Overall, though, eventual pass rates indicated that persistence for those not initially passing the bar exam led to smaller differences among groups than found when studying only pass rates at first bar exam attempt.

Table 8.3.5
Cumulative Pass Rates by Race/Ethnicity
First-Time Taker Candidates*
New York State Board of Law Examiners Sample

First-time Taker		Cumulative Passing Percentage					N
		July 2015	February 2016	July 2016	February 2017	July 2017	
July 2015	Caucasian/ White	81.6%	88.0%	89.9%	90.9%	91.7%	4755
	Asian/Pacific Islander	53.1%	63.1%	66.0%	68.0%	70.3%	1983
	Black/African American	54.0%	65.6%	70.8%	73.6%	75.4%	561
	Hispanic/ Latino	59.0%	69.9%	72.5%	75.3%	76.7%	429
July 2016	Caucasian/ White	--	--	83.4%	89.0%	91.0%	4511
	Asian/Pacific Islander	--	--	59.3%	67.7%	71.5%	1960
	Black/African American	--	--	52.5%	65.2%	70.9%	560
	Hispanic/ Latino	--	--	63.9%	73.2%	76.8%	496

* Includes domestic- and foreign-educated candidates.

Figure 8.3.5
Cumulative Pass Rates by Race/Ethnicity
First-Time Taker Candidates*
**New York State Board of Law Examiners Sample**

* Includes domestic- and foreign-educated candidates.

Table 8.3.6 and Figure 8.3.6 list pass rates by race/ethnicity for domestic-educated candidates in the NYSBLE sample at first and subsequent bar exam attempts. Compared to all candidates (e.g., Figure 8.3.5), the domestic-educated candidates had higher pass rates. Pass rates increased most between the first attempt and second attempt for each racial/ethnic group before and after UBE adoption (see Figure 8.3.6). In addition, differences in eventual pass rates between the (a) Caucasian/White group and (b) Hispanic/Latino, Asian/Pacific Islander, and Black/African American groups narrowed at each subsequent retake of the bar exam. The Black/African American group in particular saw slightly larger improvements in eventual pass rates than the other groups. Pass rate differences for the Black/African American group compared to the Caucasian/White group was 26.5 percentage points for July 2015 first-time takers and 29.7 percentage points for July 2016 first-time takers, which decreased to 16.8 percentage points and 18.8 percentage points, respectively, after two additional bar exam administrations. Eventual pass rates indicated that persistence for those not initially passing the bar exam led to smaller differences among groups than found when studying only pass rates at first bar exam attempt.

Table 8.3.6
Cumulative Pass Rates by Race/Ethnicity
Domestic-Educated First-Time Taker Candidates
New York State Board of Law Examiners Sample

First-time Taker		Cumulative Passing Percentage					N
		July 2015	February 2016	July 2016	February 2017	July 2017	
July 2015	Caucasian/ White	85.1%	90.6%	92.5%	93.4%	93.9%	4229
	Asian/Pacific Islander	73.0%	82.5%	85.2%	87.3%	88.7%	884
	Black/African American	58.6%	70.4%	75.7%	78.6%	80.4%	490
	Hispanic/ Latino	65.6%	77.9%	80.6%	83.9%	84.9%	299
July 2016	Caucasian/ White	--	--	87.5%	92.1%	93.7%	3895
	Asian/Pacific Islander	--	--	81.4%	88.9%	91.6%	898
	Black/African American	--	--	57.8%	70.0%	74.9%	483
	Hispanic/ Latino	--	--	73.0%	81.6%	85.2%	359

Figure 8.3.6
Cumulative Pass Rates by Race/Ethnicity
Domestic-Educated First-Time Taker Candidates
New York State Board of Law Examiners Sample
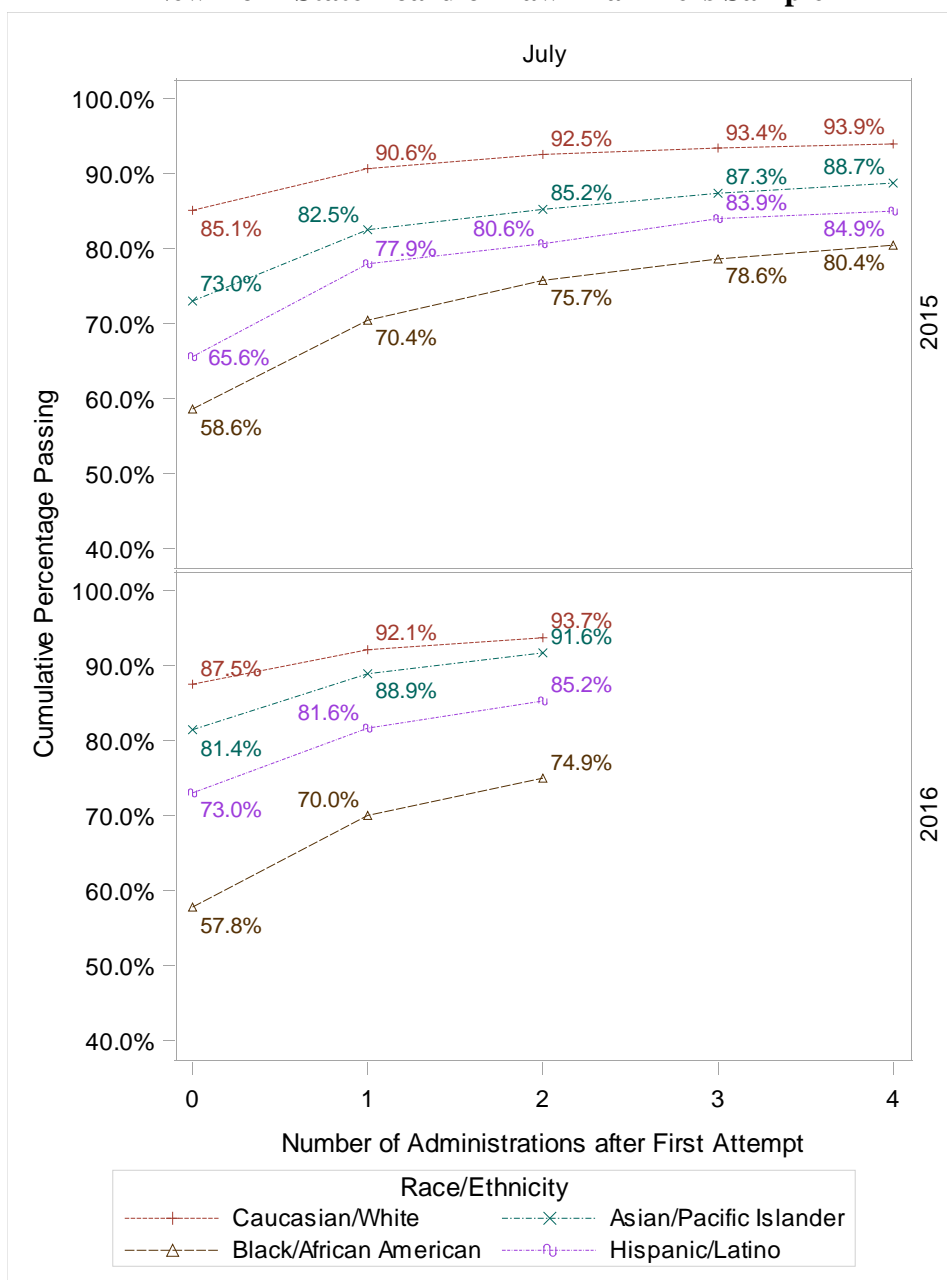
8.4 Summary

In general, eventual pass rates for candidates before and after UBE adoption followed similar trajectories. In addition, (a) the Black/African American group had larger gains in eventual pass rates compared to other groups and (b) females tended to have larger gains in eventual pass rates compared to males. That these groups tended to close the gap in differences observed in initial pass rates, regardless of whether or not the bar exam was UBE, was encouraging because it indicated that initially observed differences in performance at the group level were possible to overcome to a certain degree, despite group differences that were observed in LGPAs, LSAT scores, and UGPAs (see section 3). In addition, persistence rates for gender and racial/ethnic groups in New York were encouraging because persistence did not differ much before and after UBE adoption. Females had higher persistence rates than males and the Black/African American group had higher persistence rates than the Caucasian/White group.

As noted in section 5, the differences in pass rates between the Black/African American group and the Caucasian/White group was larger in July 2016 compared to July 2015 or July 2017. The same was true for females compared to males. This meant that the initial pass rates were somewhat lower for July 2016 first-time takers in these groups. For July 2016 first-time takers, eventual pass rates did not overcome the initially lower pass rates observed for the Black/African American group, even though the gap closed substantially at the third attempt. Female July 2016 first-time takers, however, did overcome an initially lower pass rate at the third attempt. While the data weren't available in this study, it would be interesting to study eventual pass rates by gender and race/ethnicity for July 2017 first-time takers to see if the pattern of eventual pass rates looks more similar to July 2015 because the initial pass rate patterns for the July 2015 and July 2017 group were more alike.

Analysis of persistence and eventual pass rates highlight the importance of considering how candidates do beyond an initial attempt. Initial pass rates are important for determining how candidates perform on the bar exam, but eventual pass rates provide a more complete picture of who actually ends up passing in New York. As observed above, the largest increase in eventual pass rate is at the second attempt and then eventual pass rates started to level off from there. Of course, the improvement in pass rates after repeated attempts does not tell us what candidates are doing between their initial bar exam attempt and subsequent attempts for us to better understand what strategies may be particularly successful for improving performance when taking the bar exam after not passing at an initial attempt.

9. Concluding Remarks

The analyses in this study addressed three primary questions:
1. How do candidate background characteristics compare across bar exam administrations? How do they relate to performance on the bar exam in New York before and after UBE adoption?
2. How do candidates grouped by race/ethnicity and gender perform on the bar exam before and after UBE adoption?
3. How does performance on the bar exam in New York compare before and after UBE adoption?

As observed in section 3, background characteristics in the form of undergraduate grade point averages (UGPAs), Law School Admission Test (LSAT) scores, law school grade point averages (LGPAs) shifted somewhat across February and across July bar exam administrations; they were not constant before and after UBE adoption. If anything, they tended to increase somewhat between July 2015 and July 2017. As expected, background characteristics were related to bar exam performance and the relationships were similar before and after UBE adoption. Second, candidates grouped by race/ethnicity and gender tended to perform differently on the bar exam (e.g., see Figure 4.2.6 and 4.2.27) but the differences tended to be similar before and after UBE adoption, particularly when comparing July 2015 to July 2017. There were increases in differences in performance observed for some groups (e.g., females and Black/African American groups) in July 2016 at the first UBE administration that disappeared at the next July UBE administration in 2017. In addition, review of eventual pass rates for first-time takers in July 2016 showed that the differences between (a) the Caucasian/White group and other groups and (b) females and males decreased after subsequent opportunities to retake the exam. Third, performance on the New York bar exam before UBE adoption was lower than performance after UBE adoption, however, these differences were largely due to differences in background characteristics of candidates taking the bar exam in New York rather than to the UBE. Average MBE scores increased for candidates in New York before and after UBE adoption, another indicator that candidates were better prepared at the bar exams following UBE adoption. Also, between July 2015 and July 2017, average MBE scores nationally had been increasing, although not as rapidly as in New York.

There are a number of limitations in this study. First, the data available was limited to a set of critically useful but certainly incomplete background characteristics. UGPAs, LSAT scores, and LGPAs, along with gender and race/ethnicity, were helpful for contextualizing bar exam performance, but there are likely other academic and non-academic characteristics that would be useful to consider. For example, information about how candidates prepared for the bar exam and additional details about their law school experience may help better contextualize bar exam performance. Second, the school-based sample did not perfectly represent the entire group

of domestic-educated candidates taking the bar exam in New York. Not all candidates agreed to share their background characteristics, not all schools agreed to share data with the New York State Board of Law Examiners (NYSBLE), and not all schools in the school-based sample had enough candidates to support the analysis and had to be excluded. These factors led to differences between the school-based sample and the sample of all domestic-educated candidates taking the bar exam in New York and these differences appeared particularly problematic for the February first-time takers, where results appeared rather different from all domestic-educated first-time takers in February. Third, it is difficult to separate shifts in the characteristics of candidates taking the bar exam before and after UBE adoption from effects that may be due indirectly to the UBE; candidates choosing to take the bar exam in New York may shift in certain ways because New York adopted the UBE. It is also possible that candidates adapt their bar preparation activities to reflect changes to the exam.

As mentioned at the beginning of this study, the bar exam in a jurisdiction can be thought of like an ecosystem that adapts to changes. UBE adoption was a shift that could have led to shifts in the group choosing to take the bar exam in New York or choosing to repeat the bar exam in New York. The portability advantage of the UBE is also a complicating factor in studying the impact of the UBE because of these potential indirect effects. For example, increases observed in MBE performance in New York between July 2015 and July 2017 were larger than increases observed nationally. Although we think it is unlikely that the UBE explained the increases in performance in New York, the possibility cannot be ruled out entirely.

The purpose of this study was to review the impact of UBE adoption in New York for the New York Board of Law Examiners. Based on the data available for this study, the impact of adopting the UBE on candidate performance was, at most, small and positive. However, results contained in this study are useful to others conducting research and working in law school admissions, law school education, academic support, bar preparation, and bar admissions. We would encourage law schools, jurisdictions, and other stakeholders to continue to participate in, conduct analysis of, and support research studies like this one to better understand various aspects of candidates' paths to bar exam success.