Baltimore Regional Transportation Board

U.S. Census Bureau Population Estimates

Jurisdiction Level Components of Change – v2021

August 24, 2022

BMC

U.S. Census Bureau Population Estimates Program (PEP)

- **What is the Population Estimates Program?**
- **What is PEP data used for?**
- **What data products are produced by PEP?**
  - Population estimates and components of change (US/State/MSA/County)
  - Resident population by age/sex/race/Hispanic origin (US/State/County)
  - Total resident population (Subcounty levels including City/Town)
  - Housing Units (US/State/County)
  - Other

U.S. Census Bureau Population Estimates (v2021)

- Released March 24, 2022 (County Level)
- PEP: Components of Change

Source: U.S. Census Bureau

- Data Sources
  - Natural Increase
    - Vital statistics records
  - Migration
    - International
    - Domestic

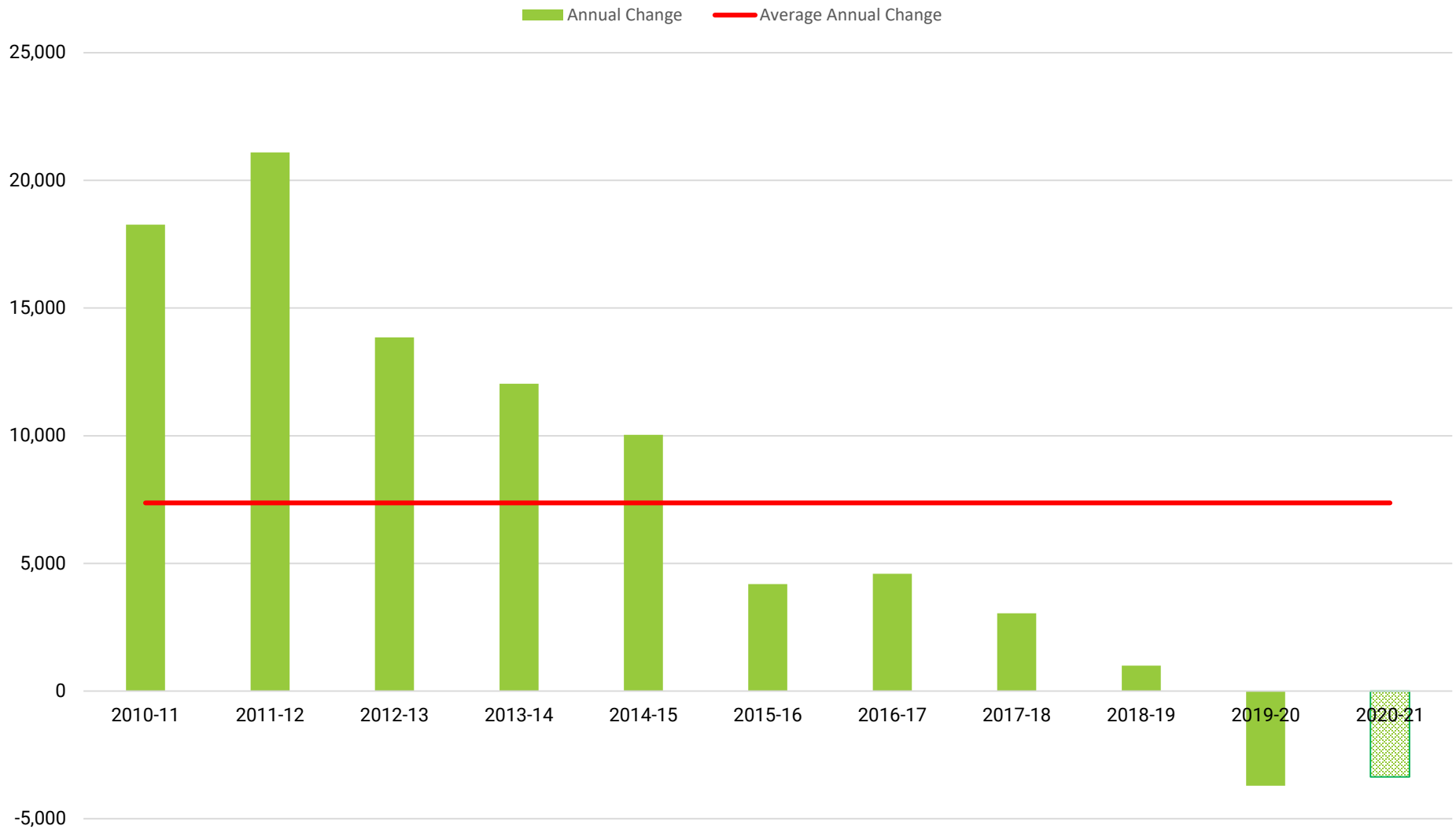
Population Growth: April 1, 2020 - July 1, 2021

Jurisdiction	Decennial April 1, 2020	PEP July 1, 2021	Growth Num	Pct
United States	331,449,281	331,893,745	444,464	0.1%
Maryland	6,177,224	6,165,129	-12,095	-0.2%
Baltimore Region	*2,844,510*	*2,838,327*	*-6,183*	*-0.2%*
Anne Arundel County	588,261	590,336	2,075	0.4%
Baltimore City	585,708	576,498	-9,210	-1.6%
Baltimore County	854,535	849,316	-5,219	-0.6%
Carroll County	172,891	173,873	982	0.6%
Harford County	260,924	262,977	2,053	0.8%
Howard County	332,317	334,529	2,212	0.7%
Queen Anne's County	49,874	50,798	924	1.9%

Source: U.S. Census Bureau - 2020 Decennial Census and v2021 Population Estimates.

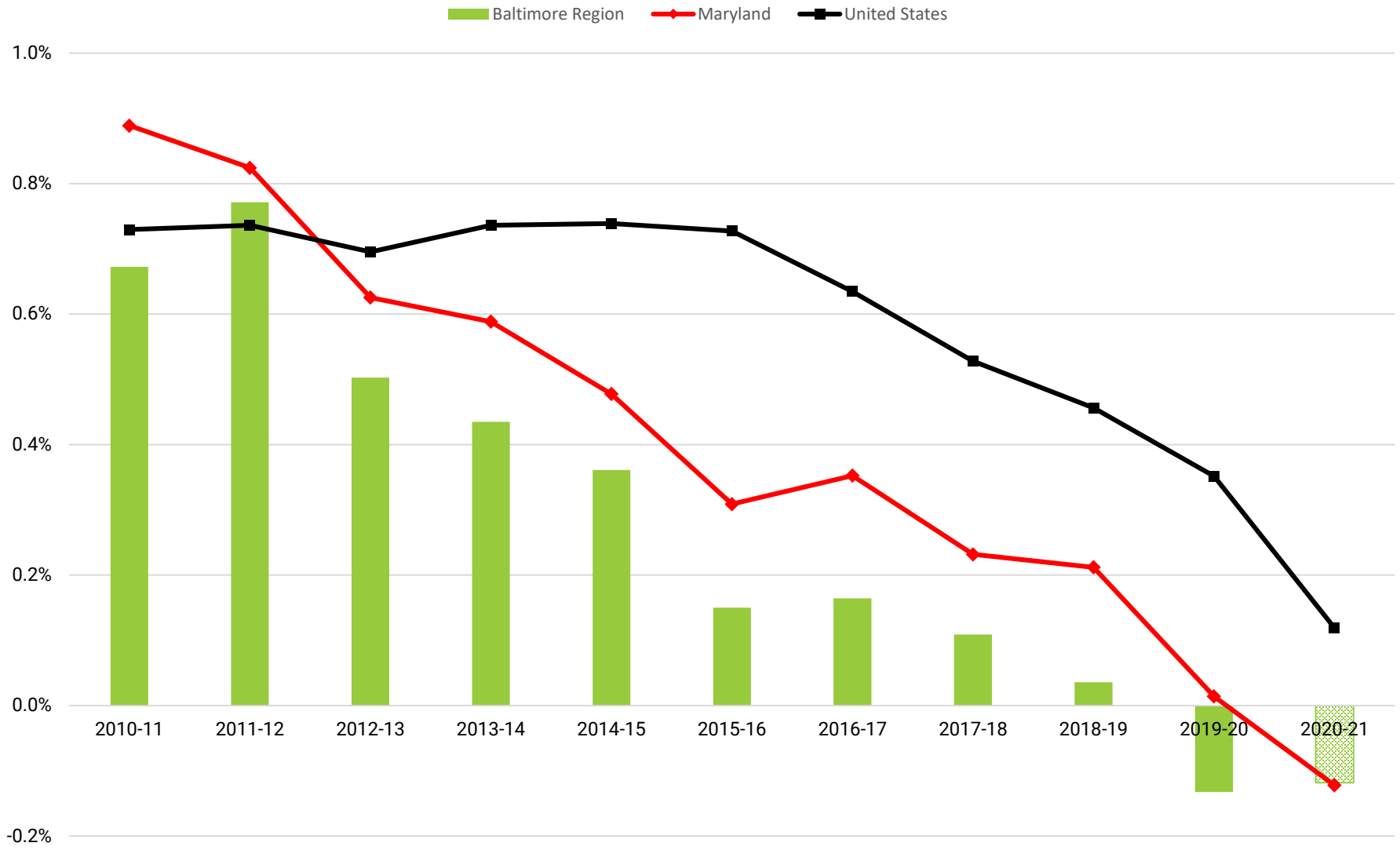
Baltimore Region

Baltimore Region - Annual Population Change



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Baltimore Region, Maryland, and U.S. - Annual Population Growth Rates



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

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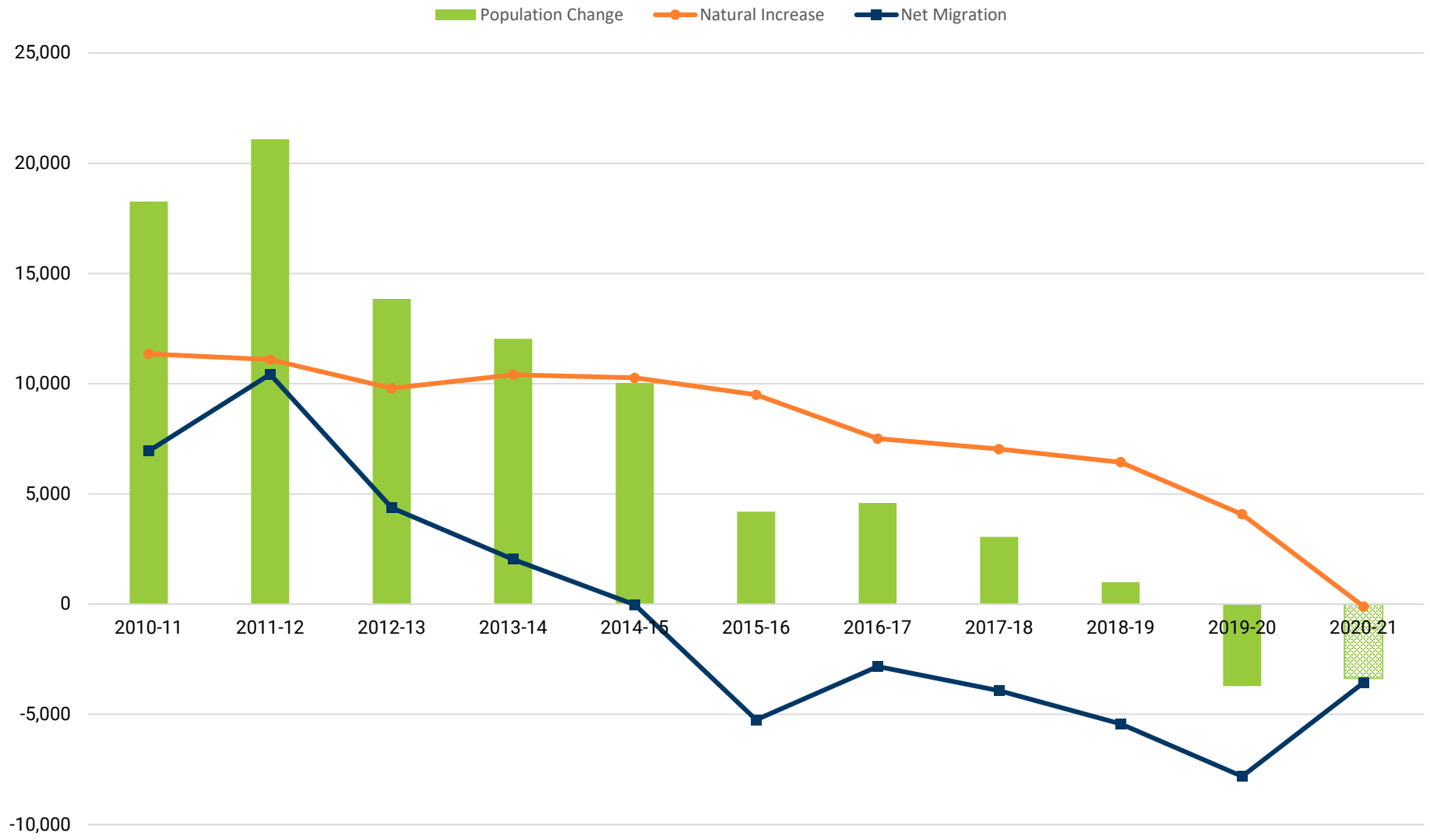
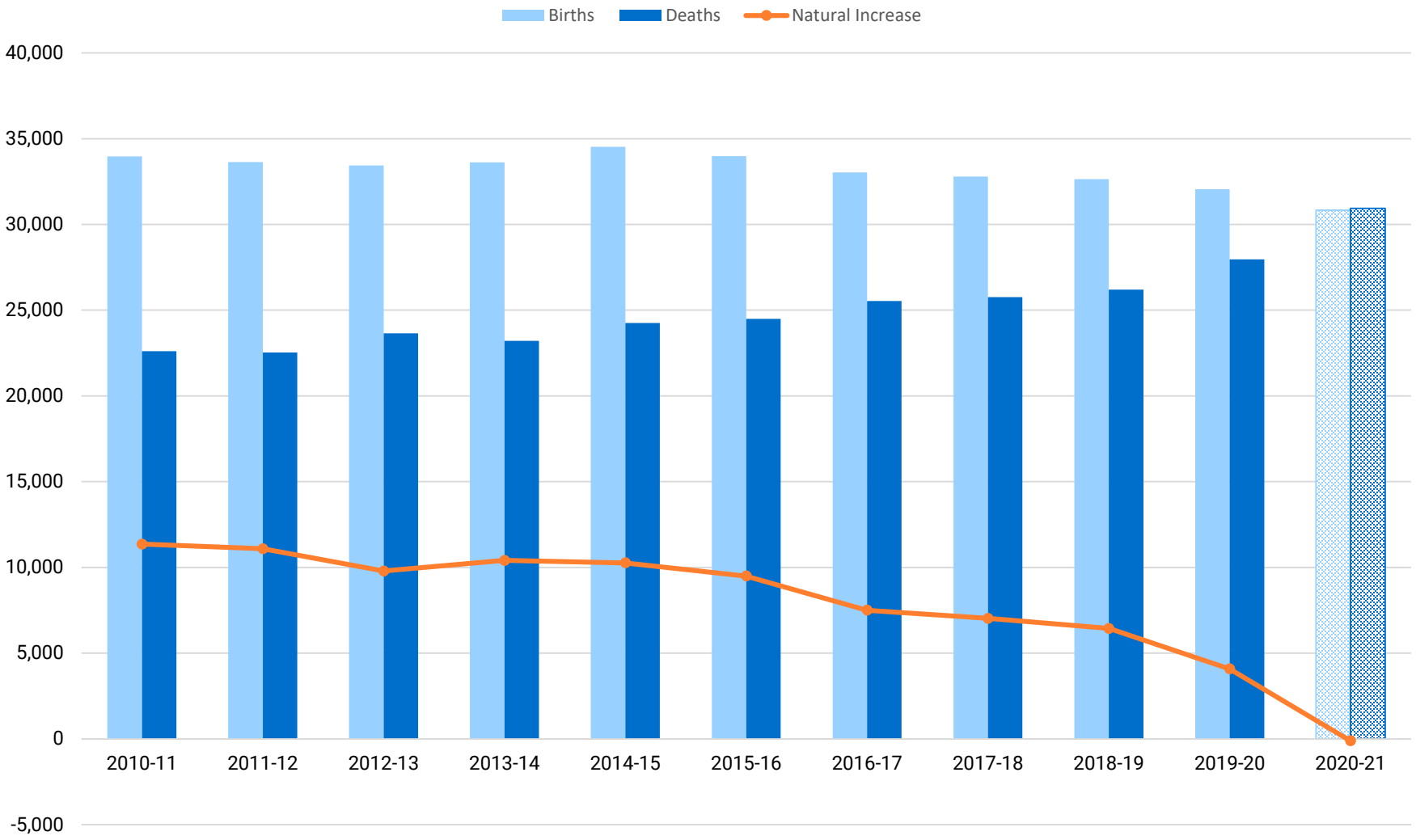
Baltimore Region – Components of Population Change



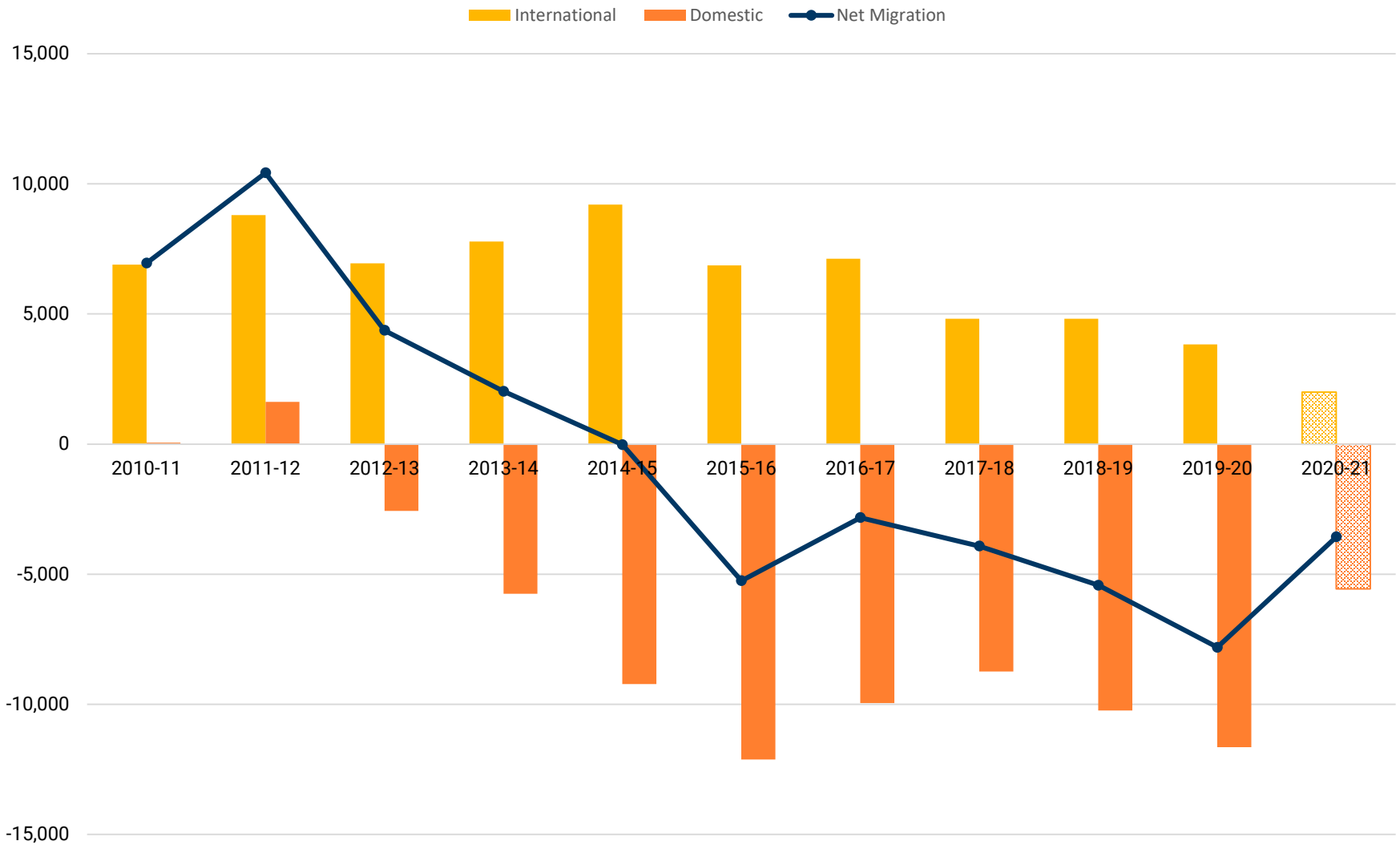
Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Baltimore Region – Natural Increase



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

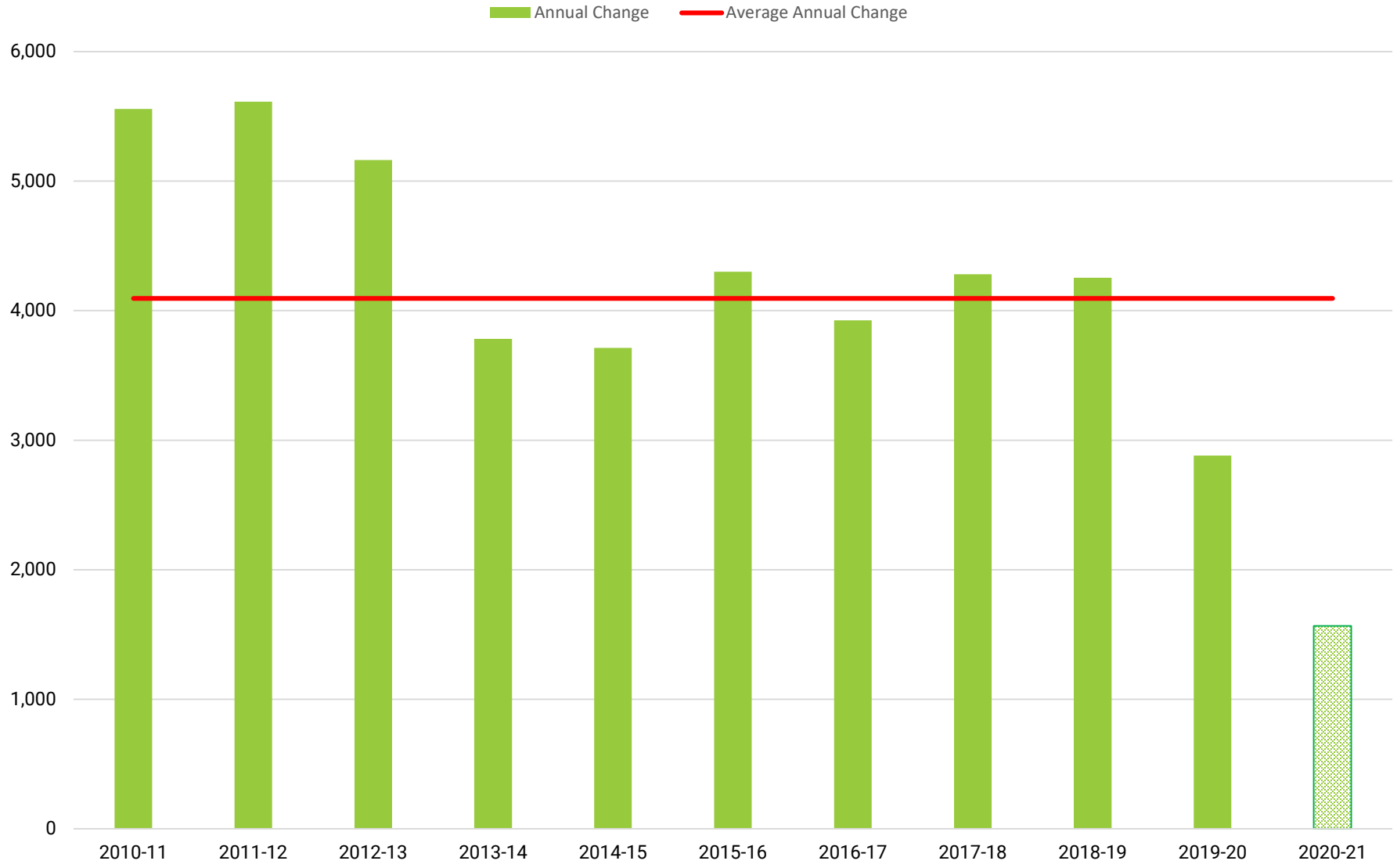
Baltimore Region – Migration



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Anne Arundel County

Anne Arundel County - Annual Population Change



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

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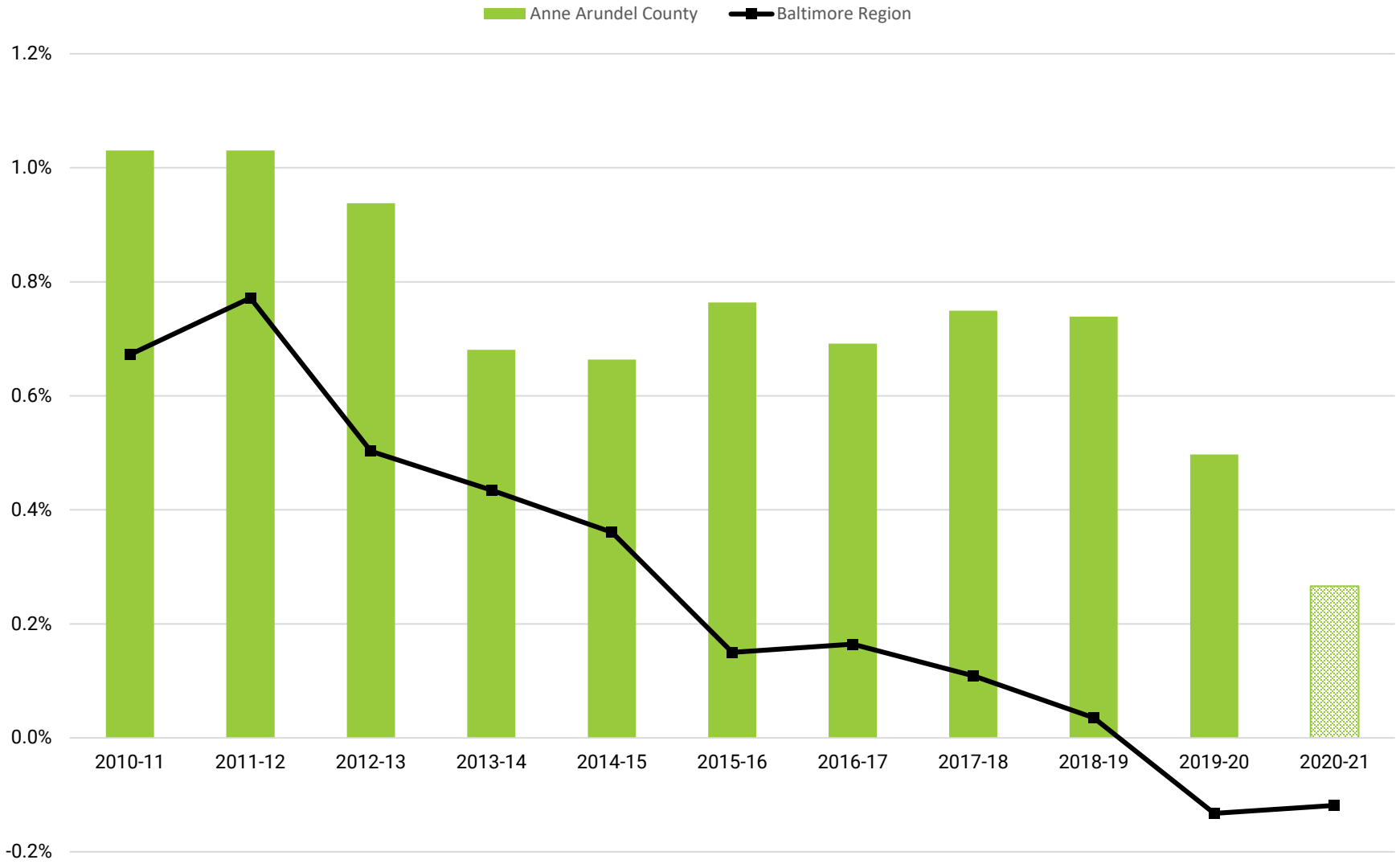
Anne Arundel County & Baltimore Region - Annual Population Growth Rate



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

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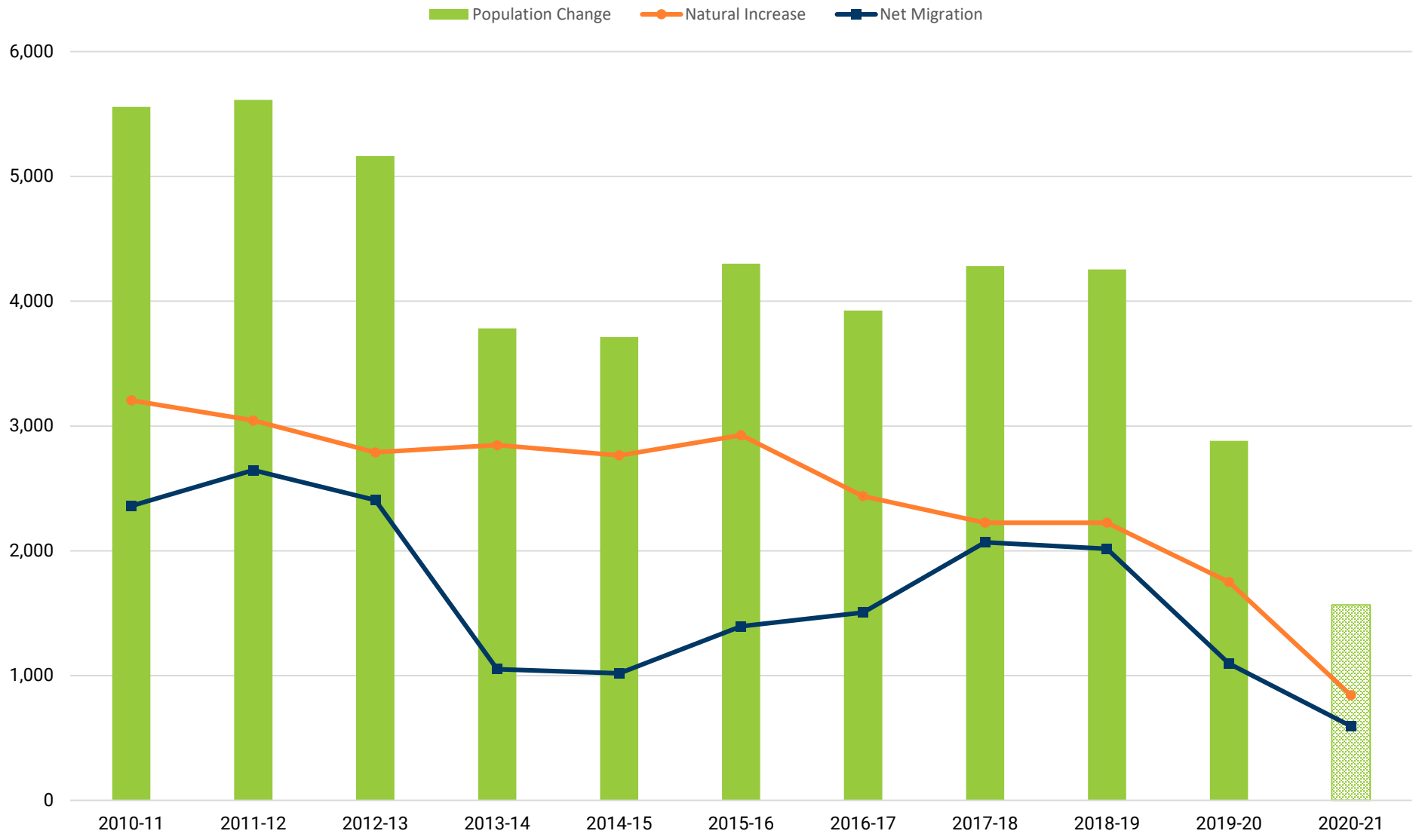
Anne Arundel County – Components of Population Change



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

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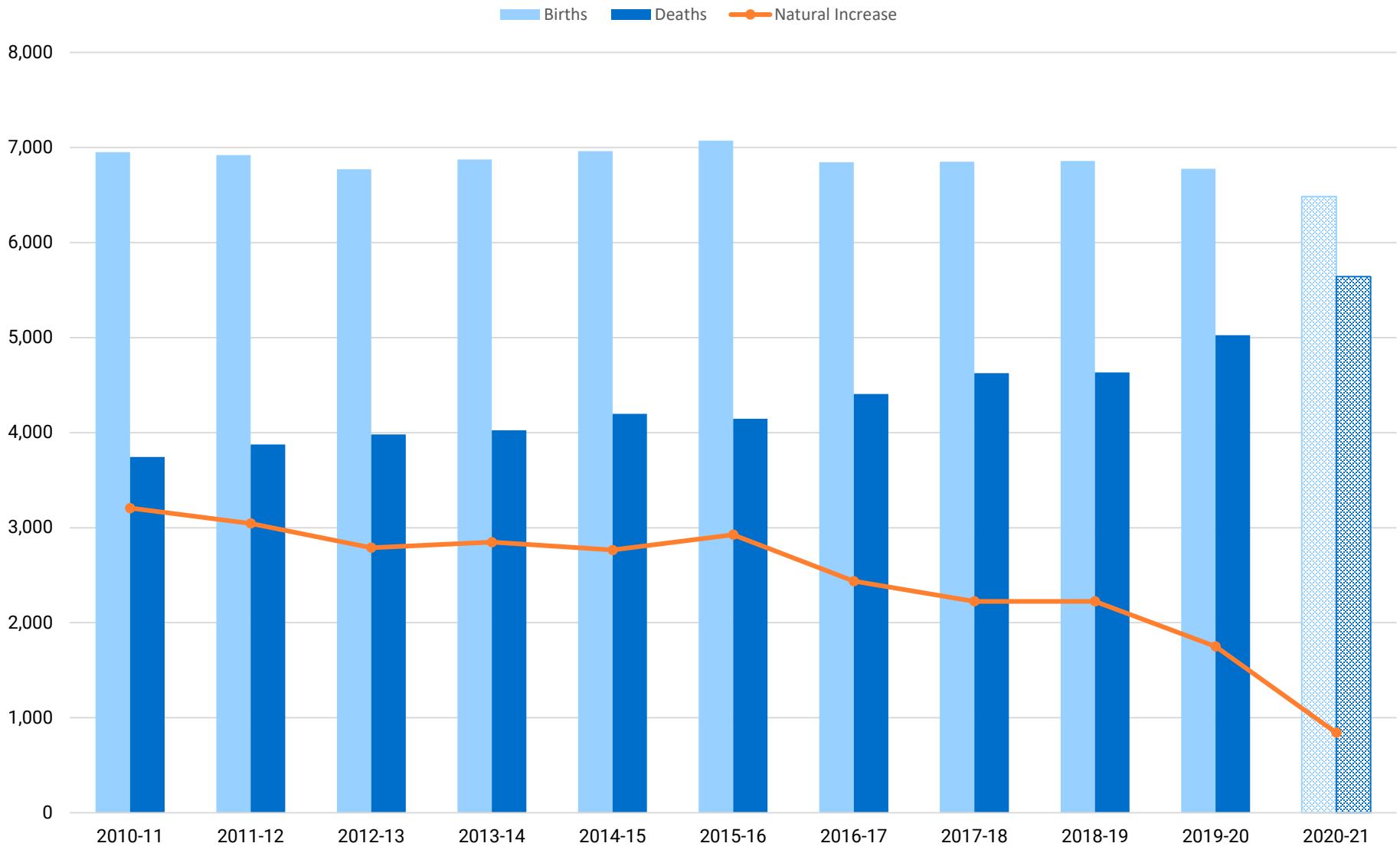
Anne Arundel County – Natural Increase



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

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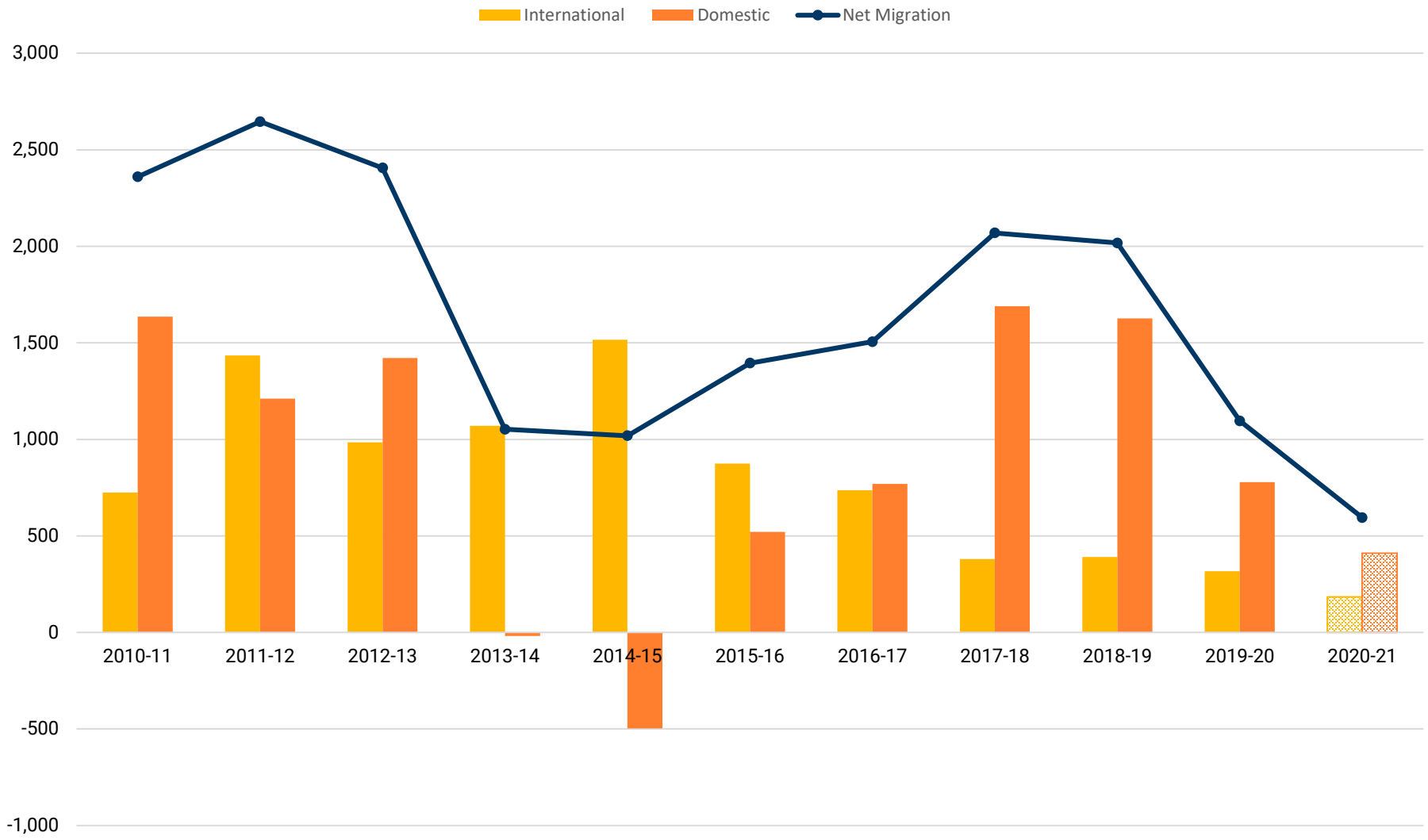
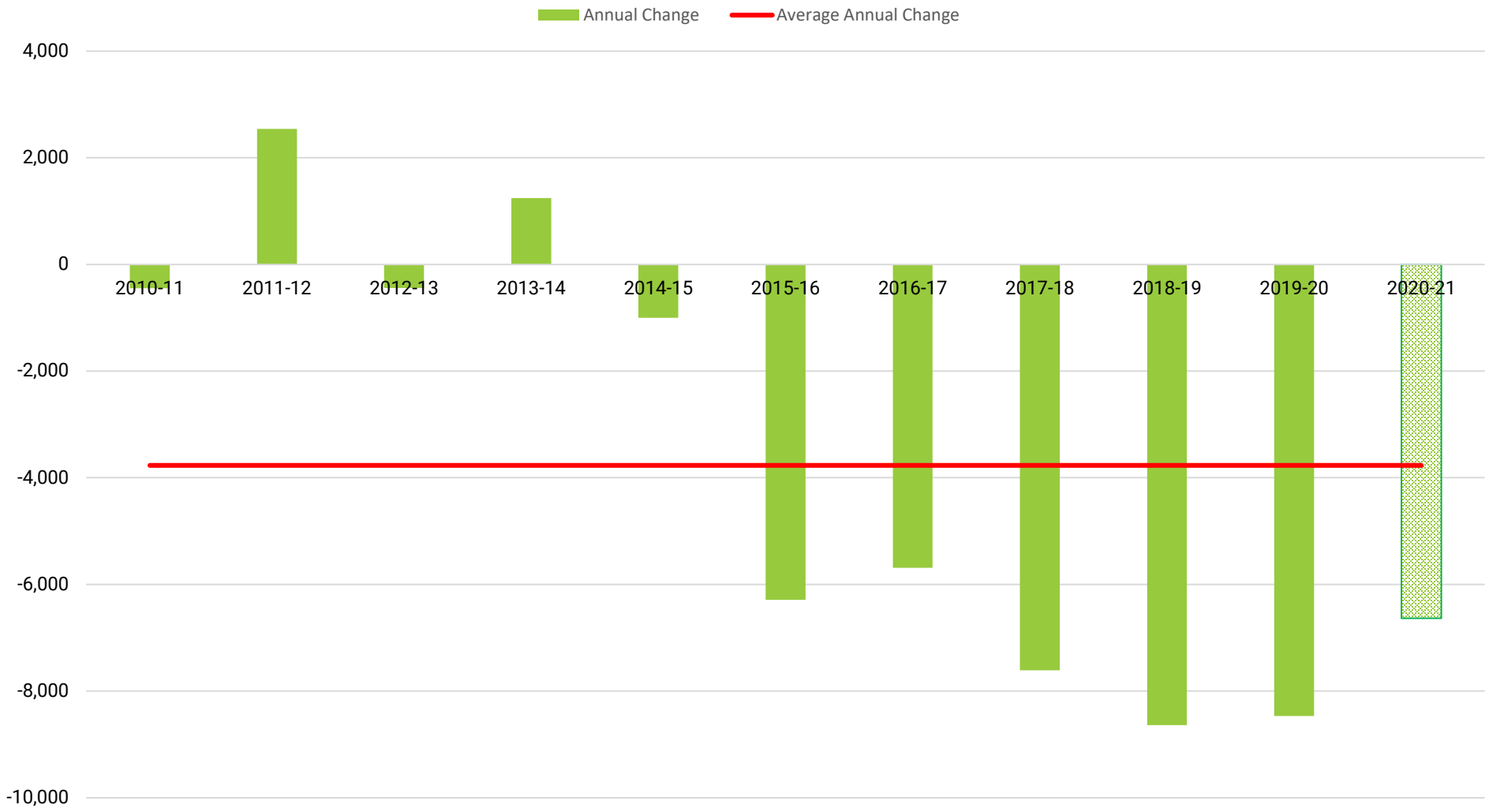
Anne Arundel County – Migration



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

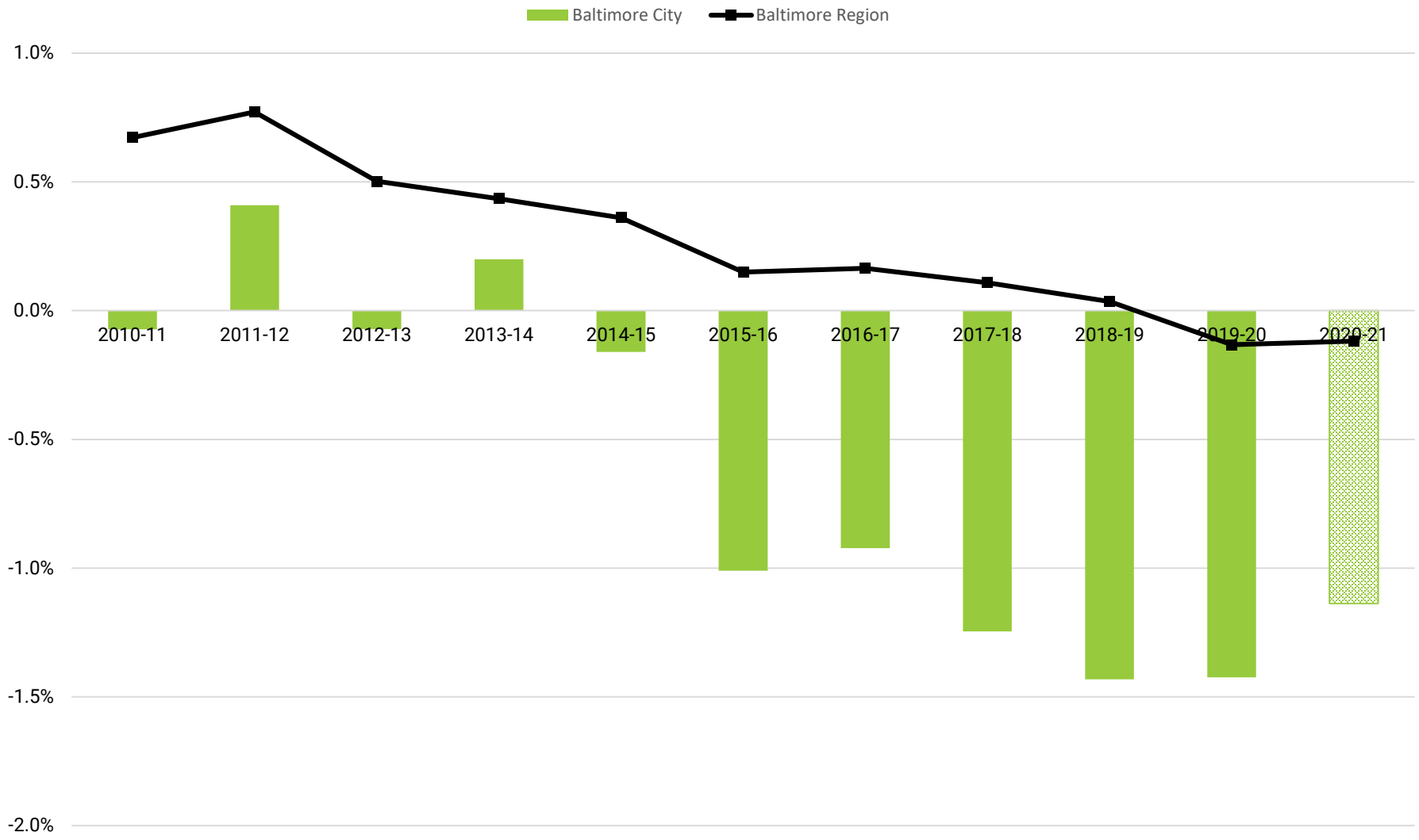
Baltimore City

Baltimore City - Annual Population Change



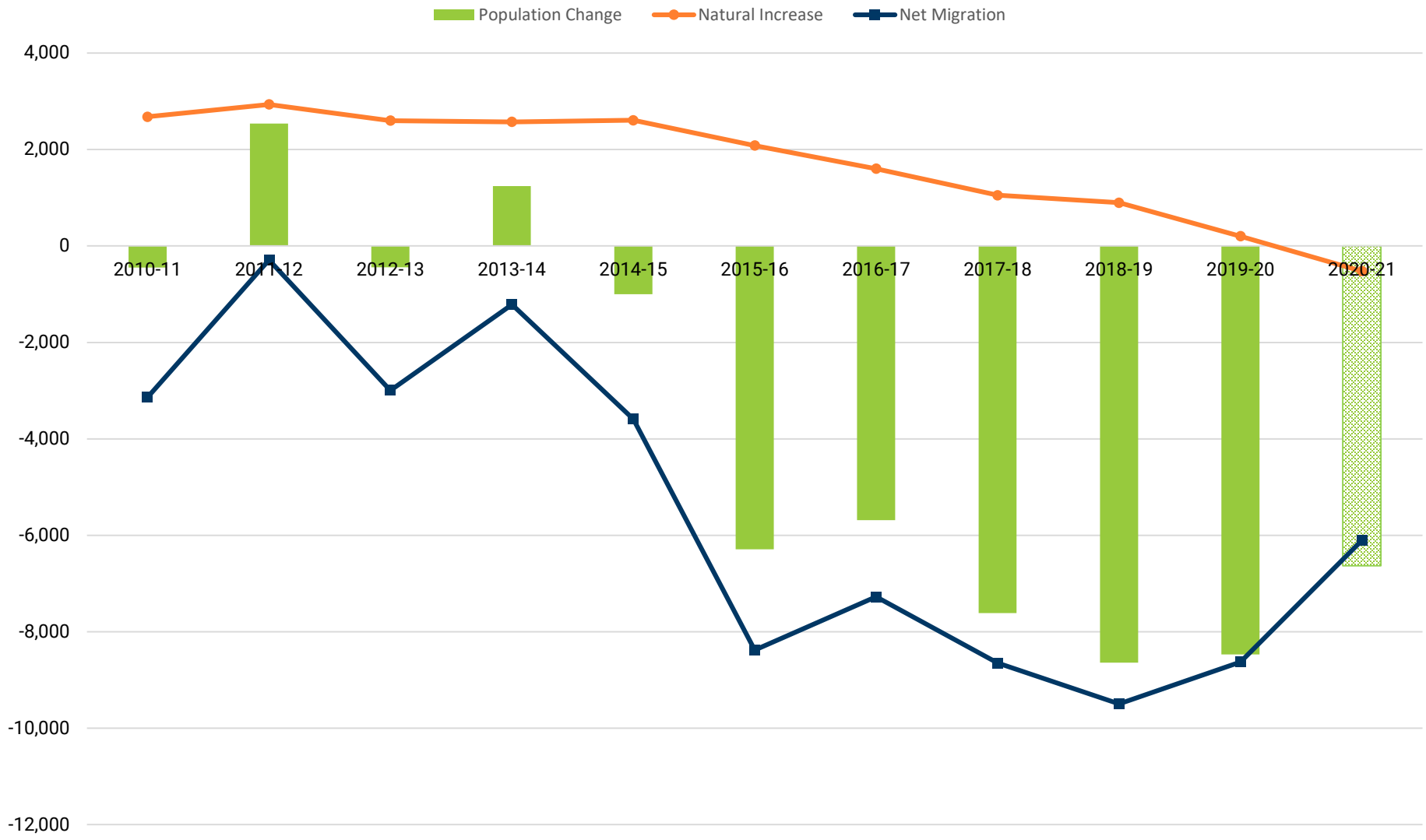
Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Baltimore City & Baltimore Region - Annual Population Growth Rate



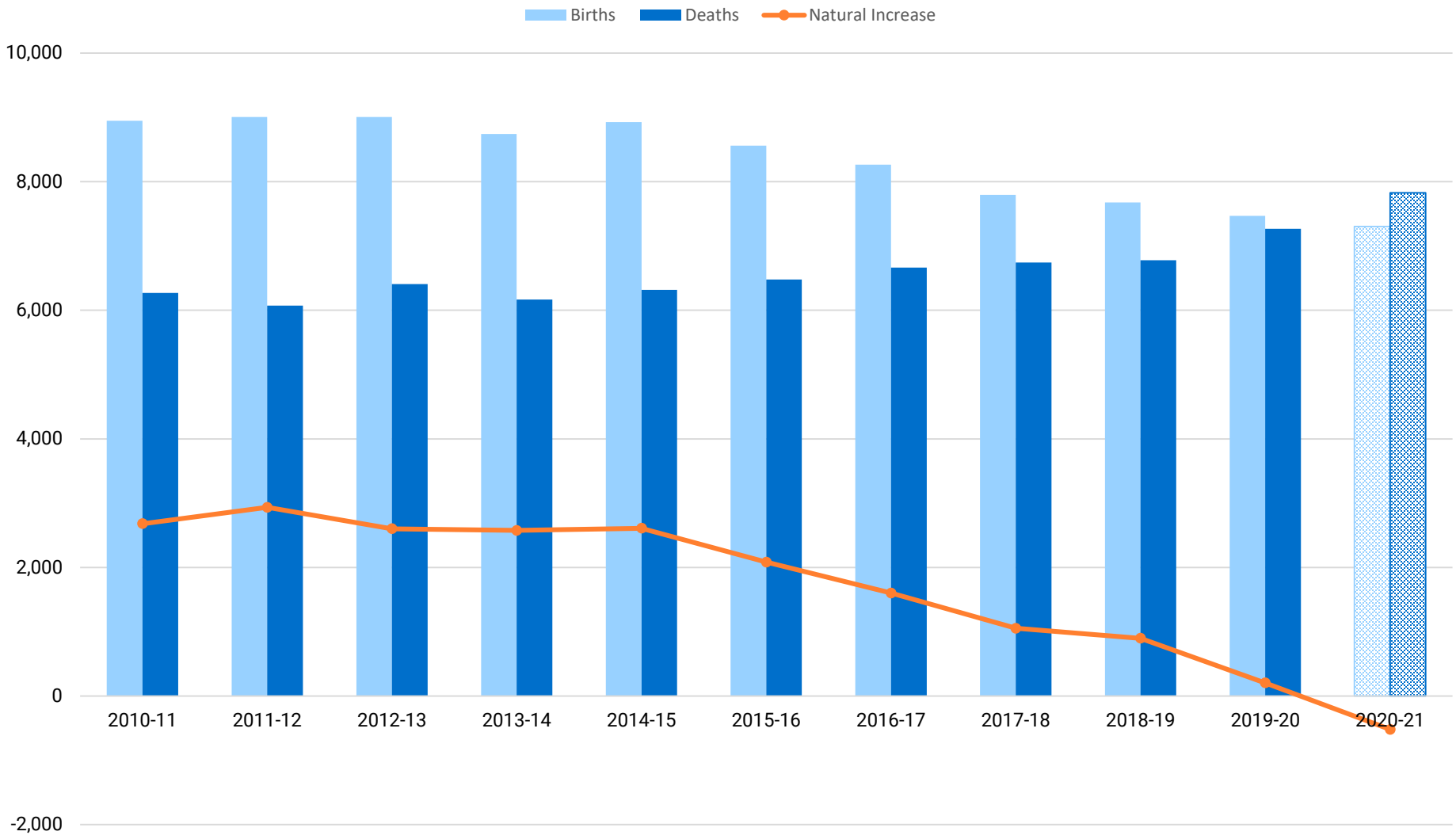
Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Baltimore City – Components of Population Change



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Baltimore City – Natural Increase



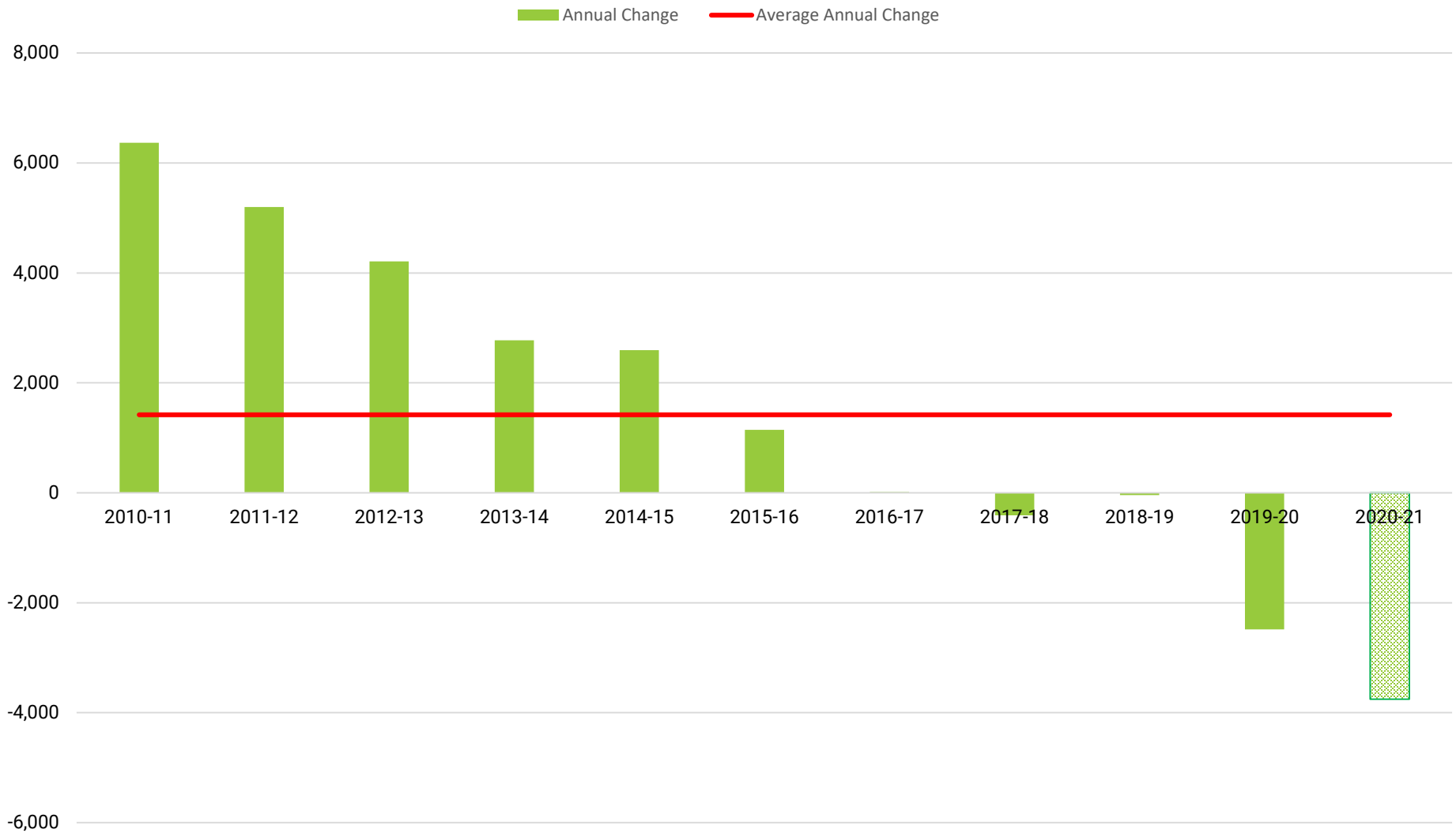
Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Baltimore City – Migration

Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Baltimore County

Baltimore County - Annual Population Change

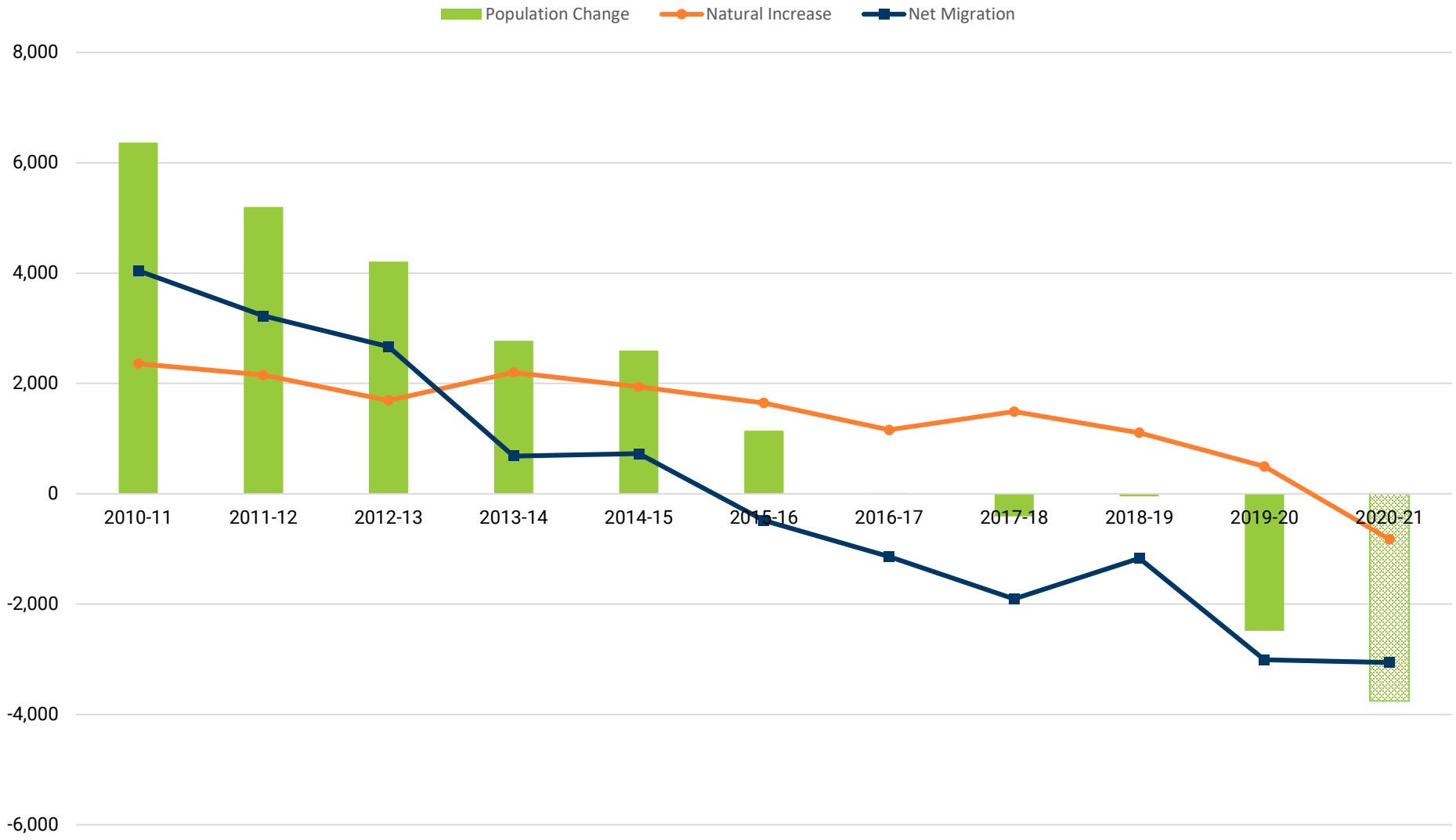


Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Baltimore County & Baltimore Region - Annual Population Growth Rate

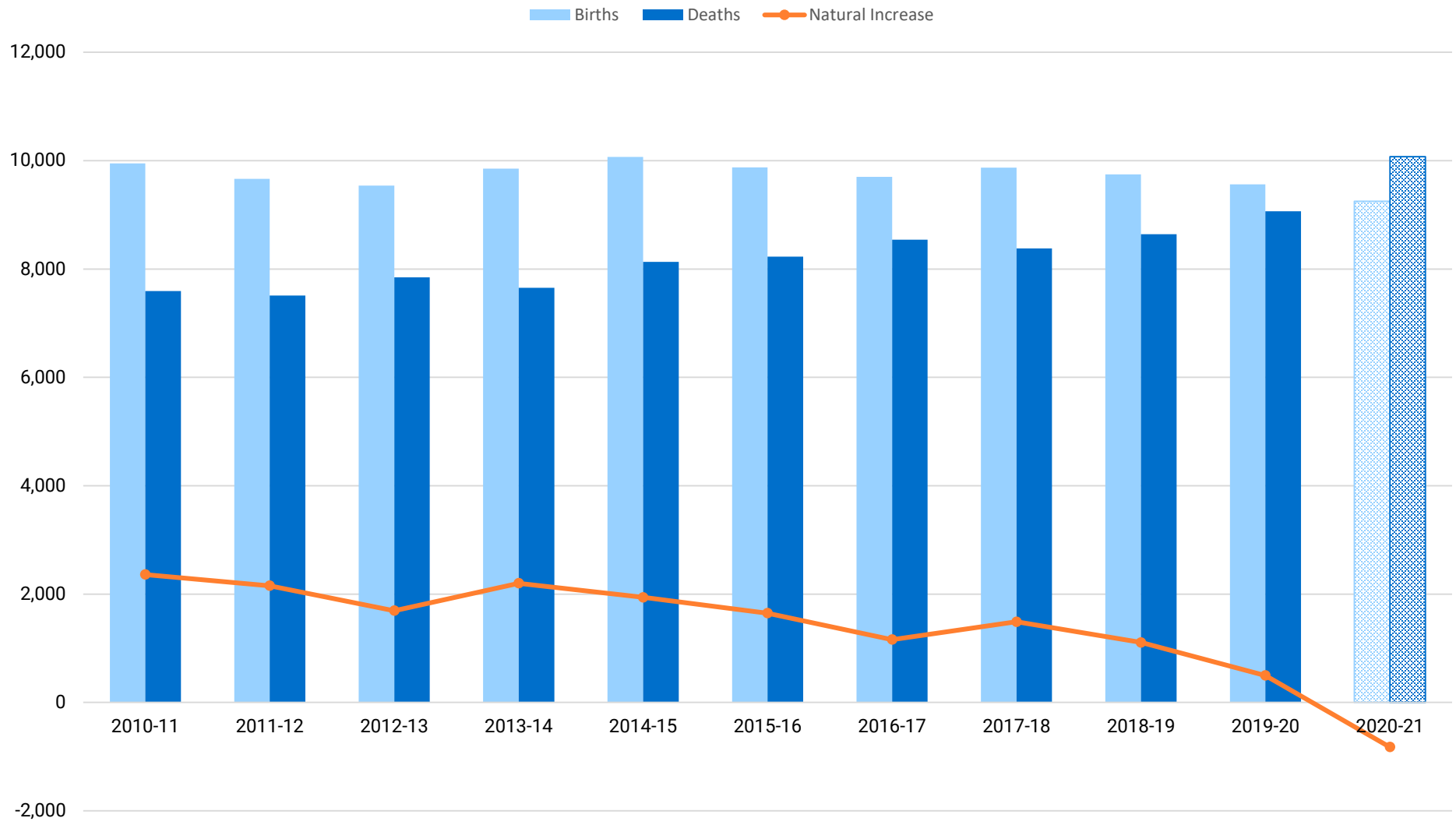
Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Baltimore County – Components of Population Change



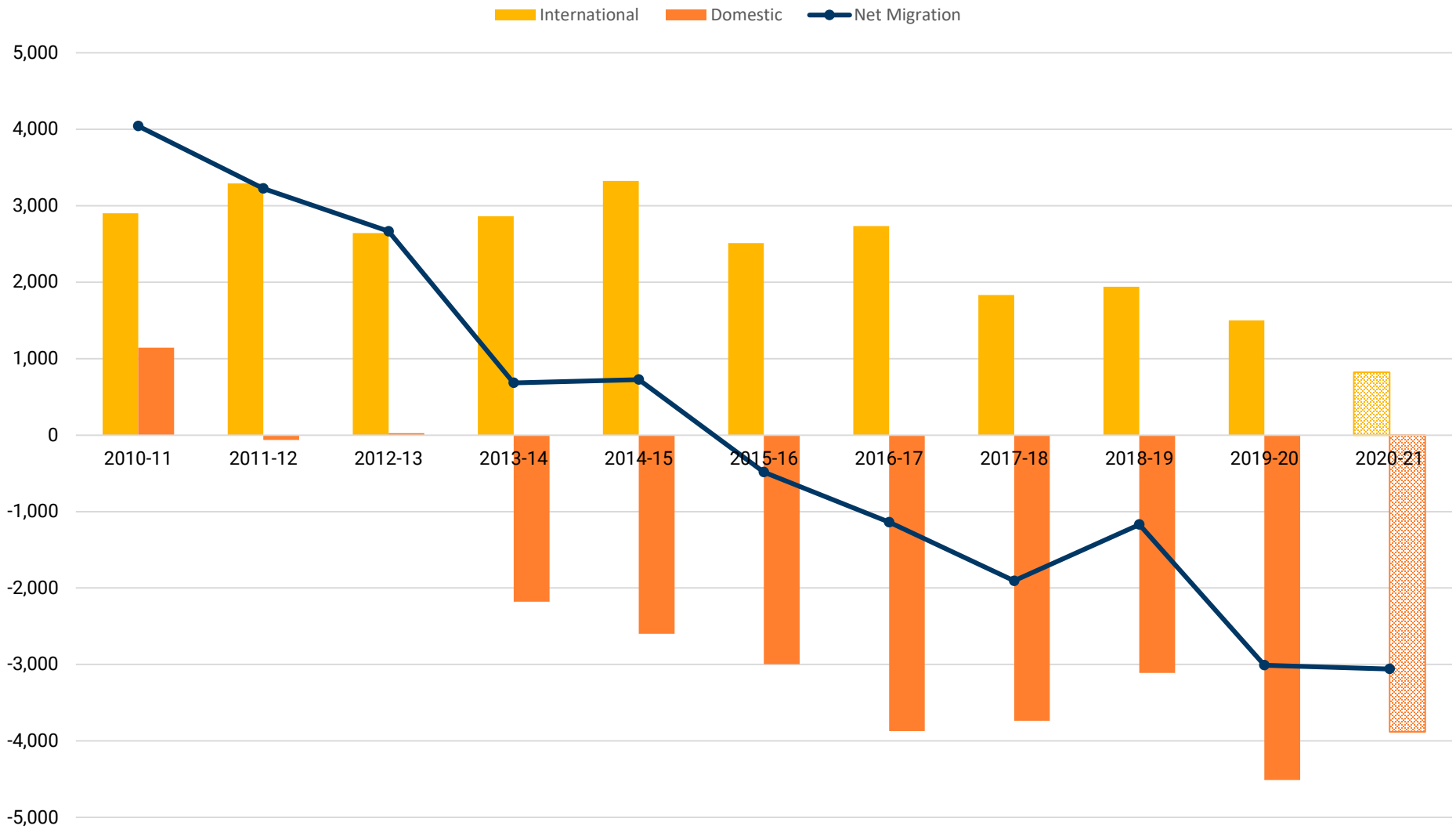
Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Baltimore County – Natural Increase



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

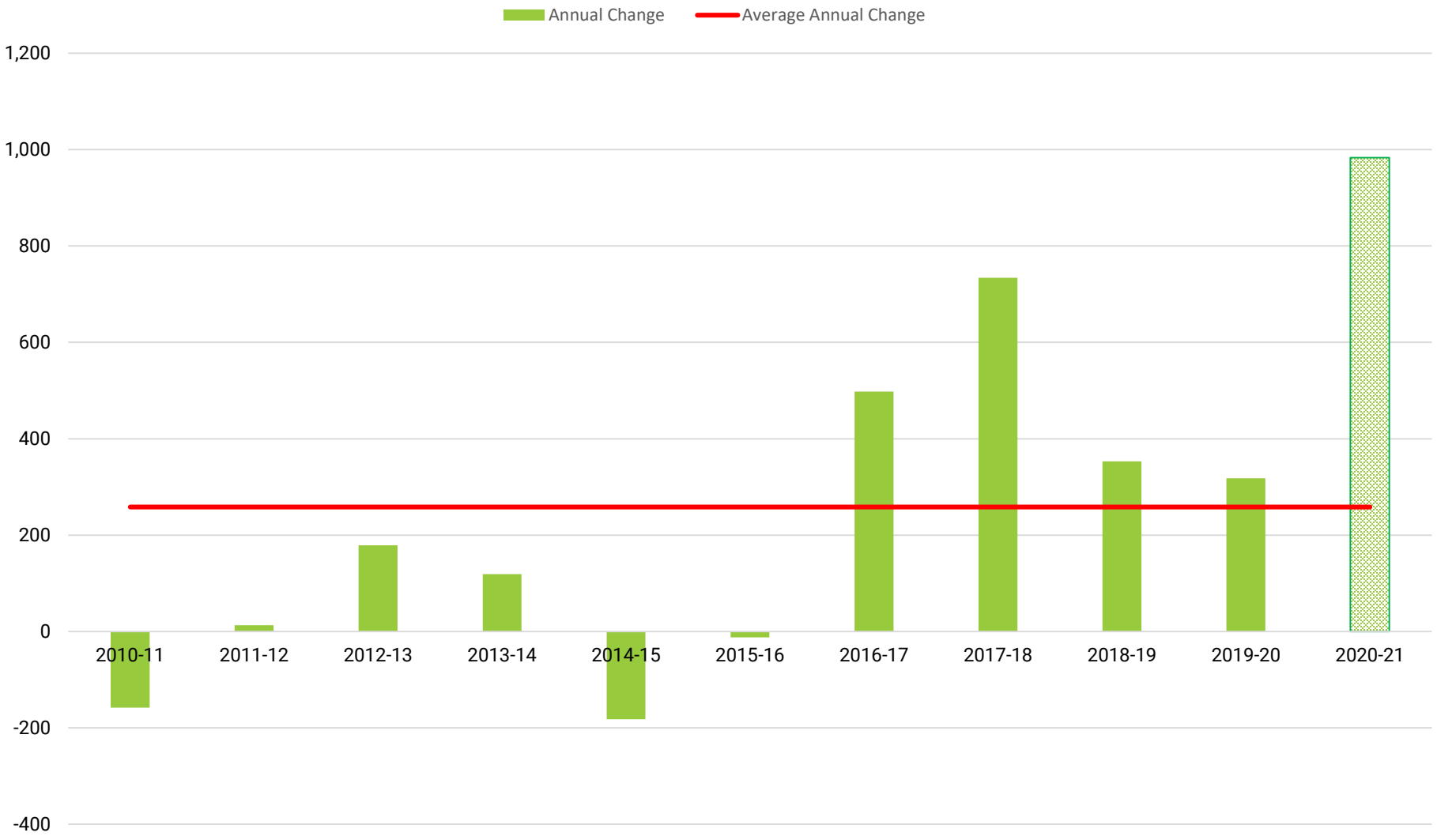
Baltimore County – Migration



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

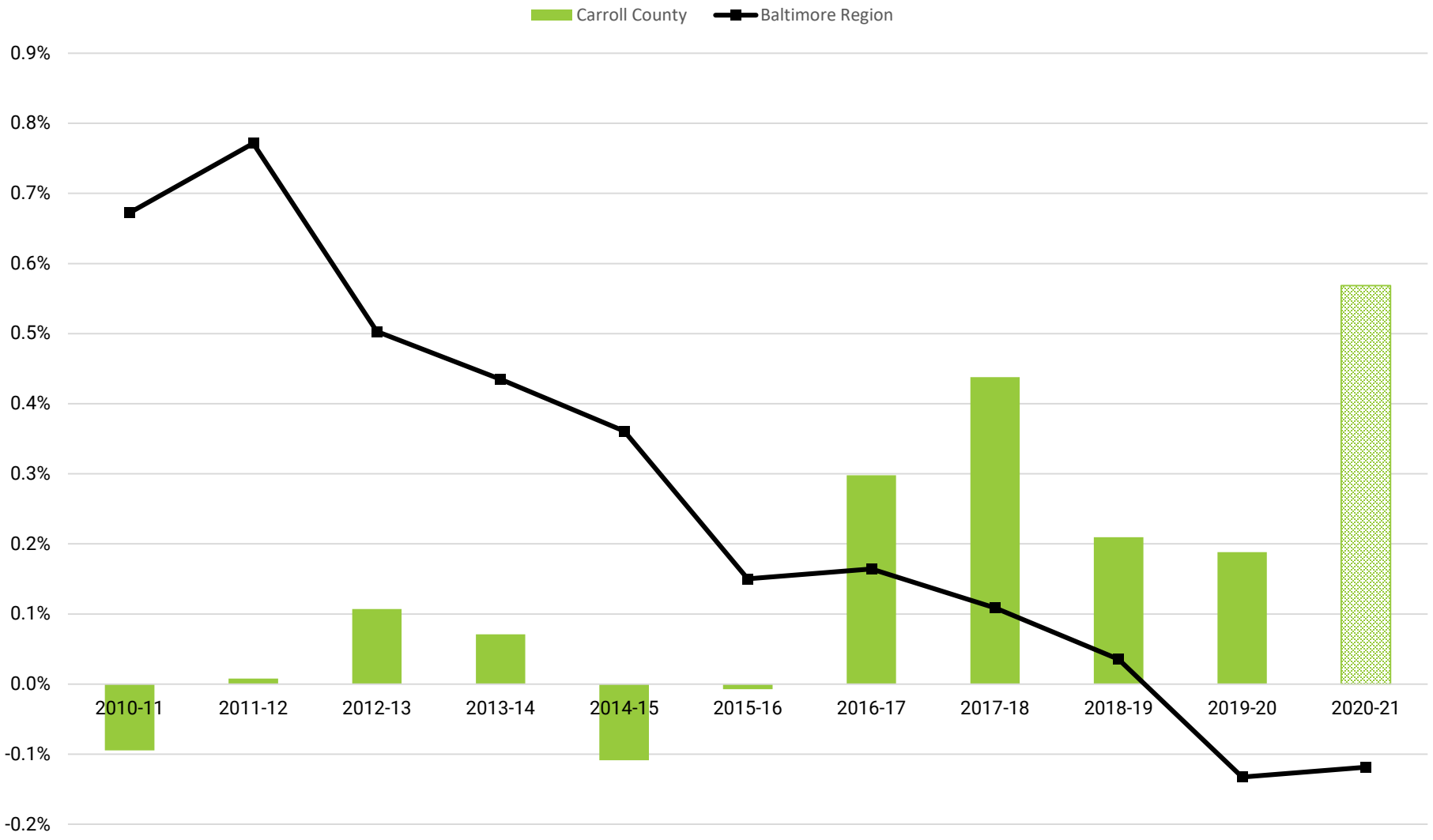
Carroll County

Carroll County - Annual Population Change



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Carroll County & Baltimore Region - Annual Population Growth Rate



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

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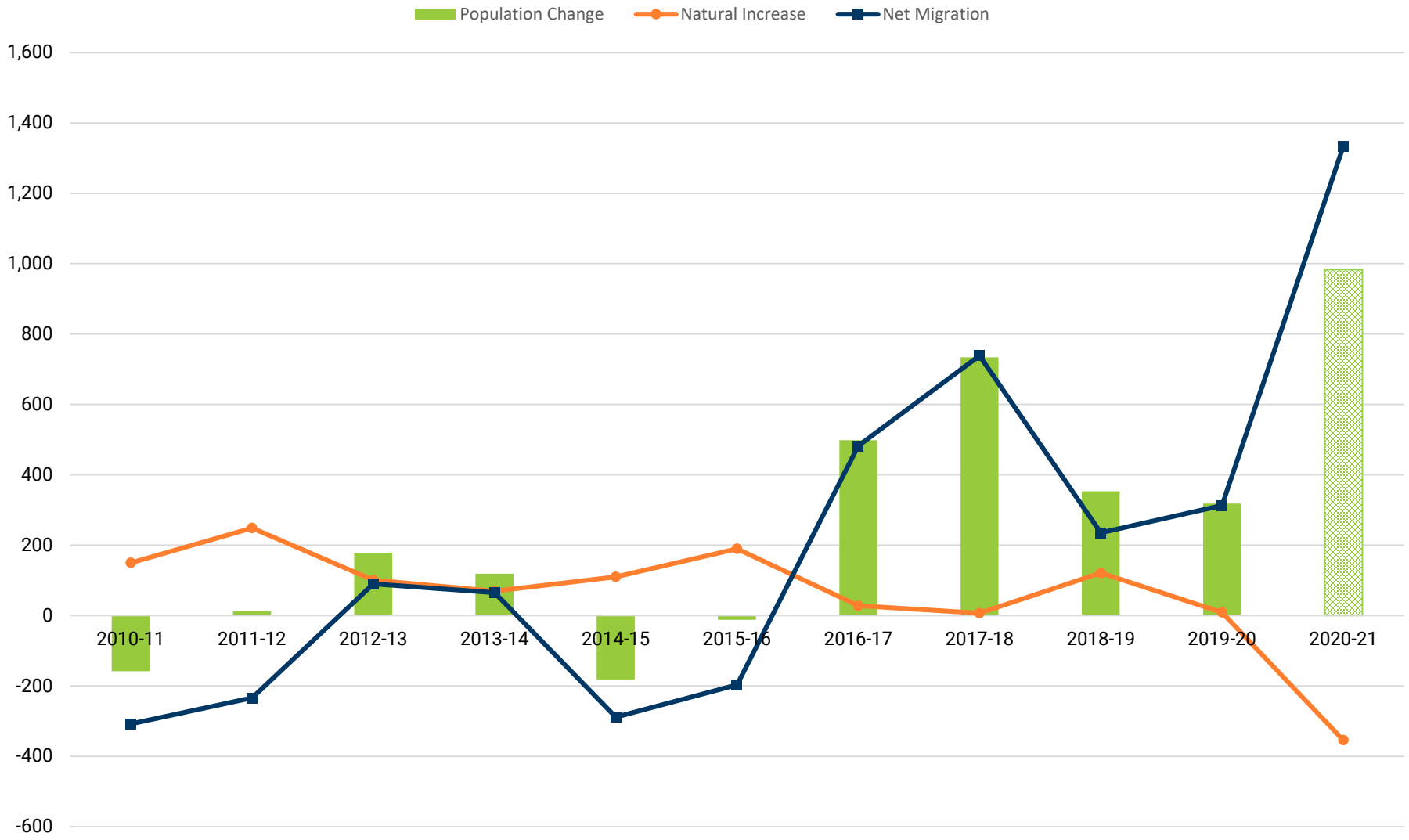
Carroll County – Components of Population Change



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

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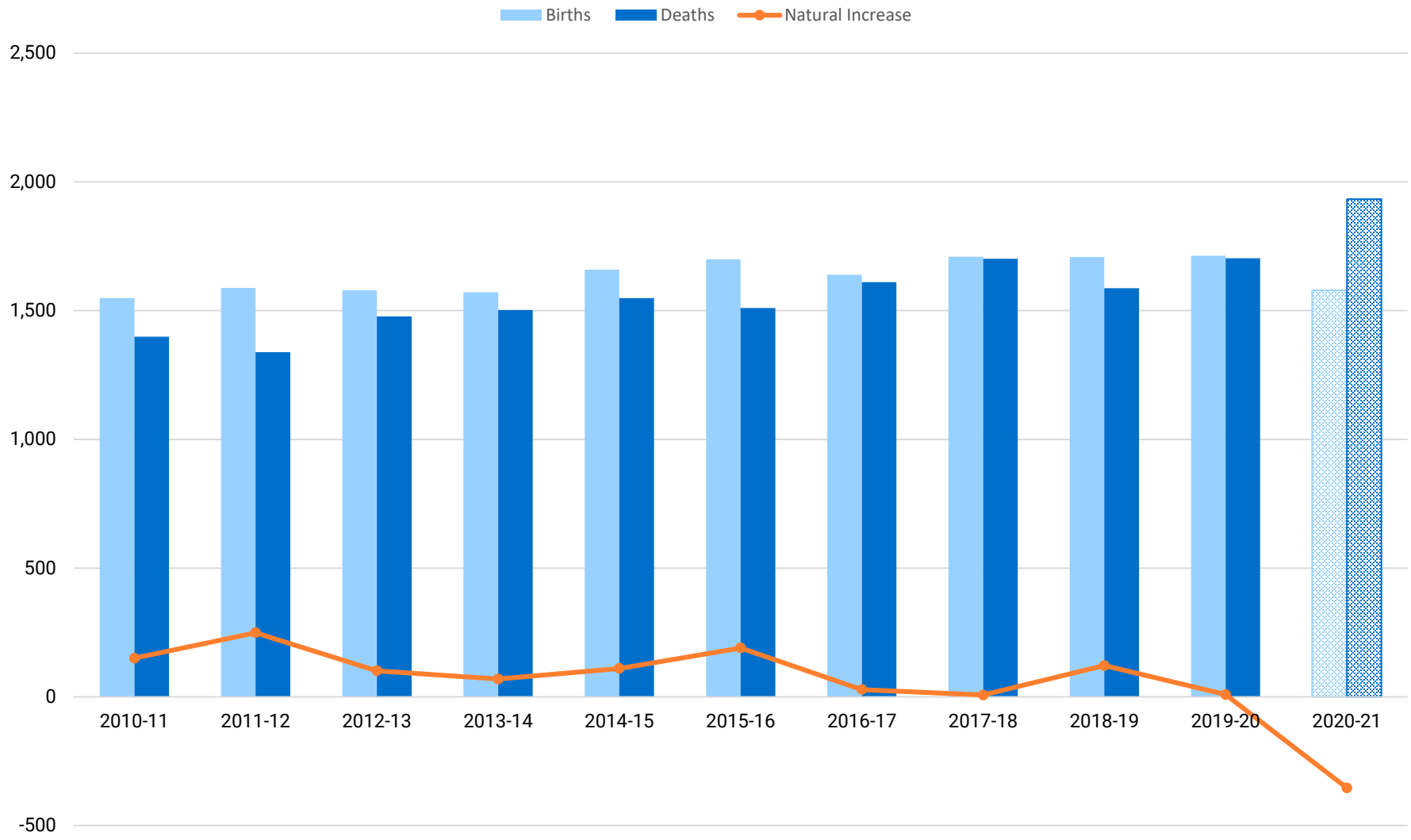
Carroll County – Natural Increase



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

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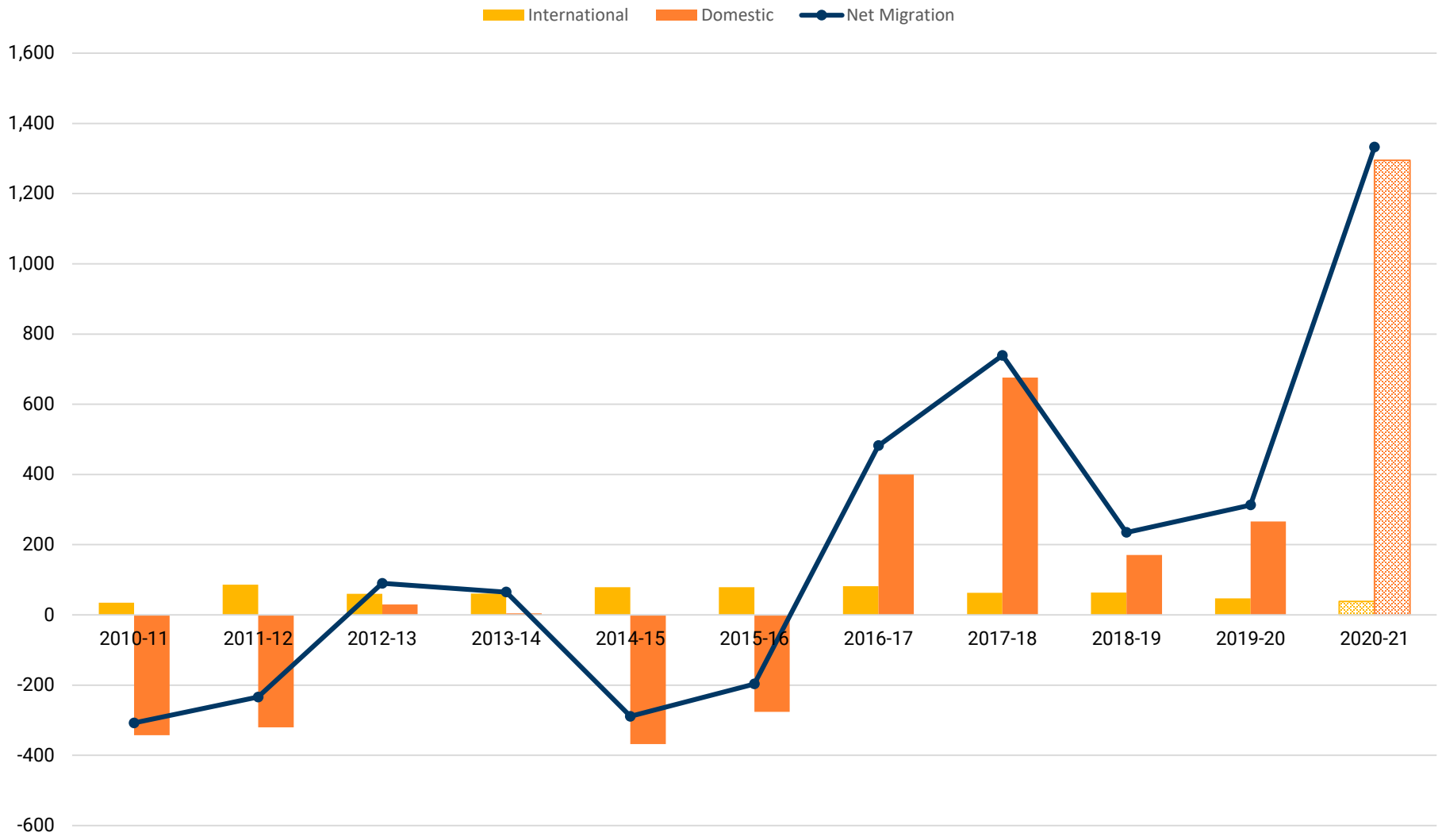
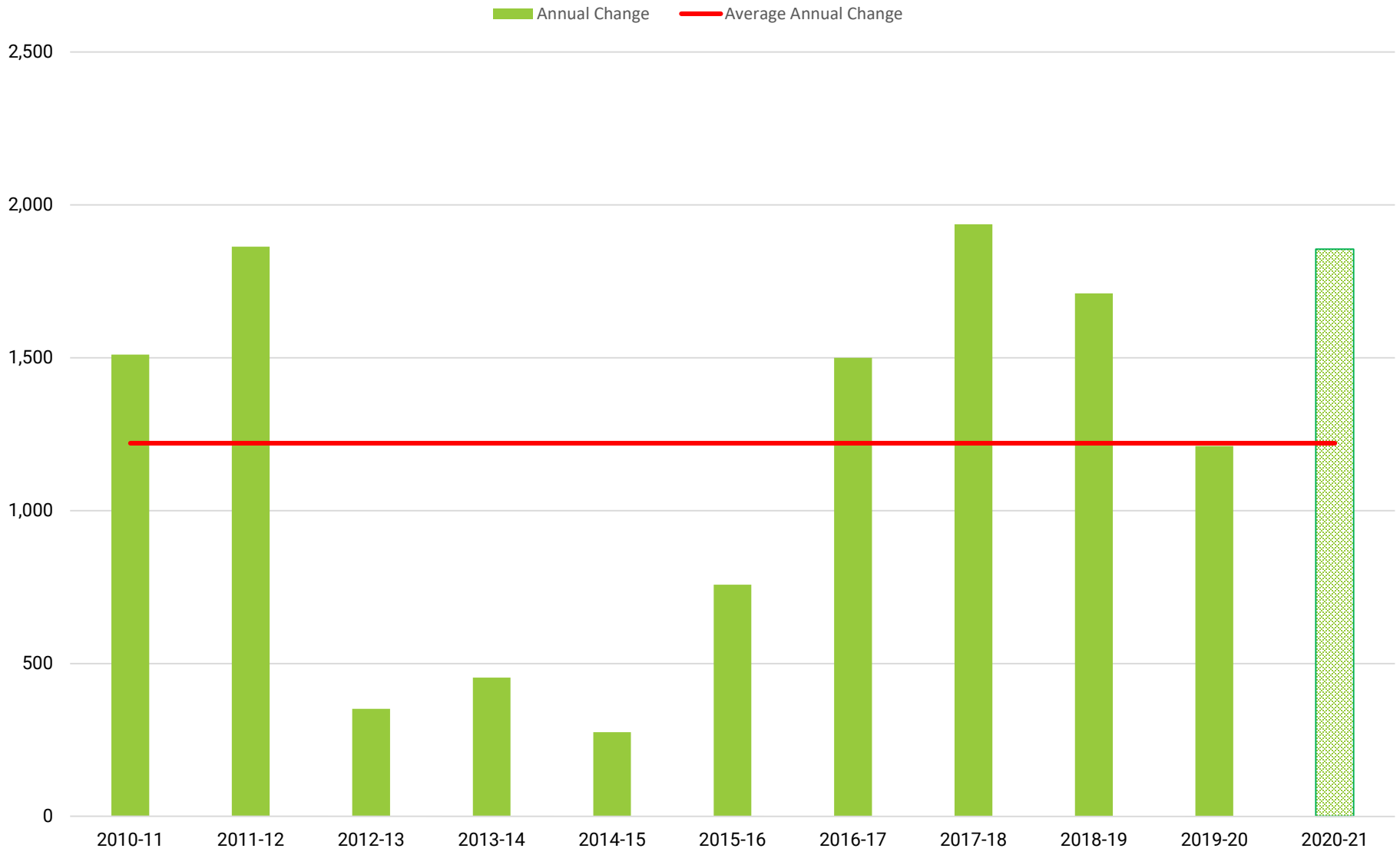
Carroll County – Migration



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

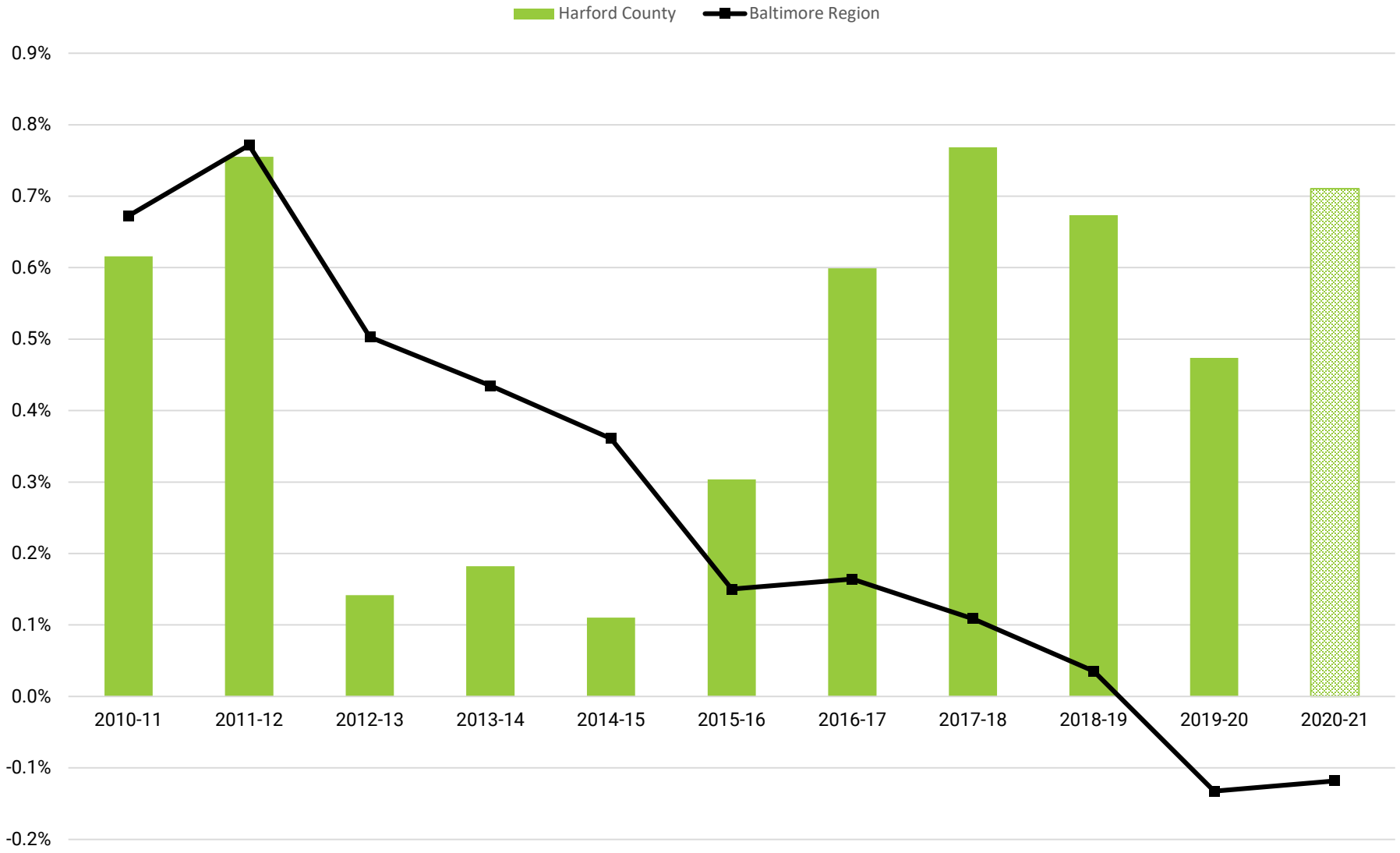
Harford County

Harford County - Annual Population Change



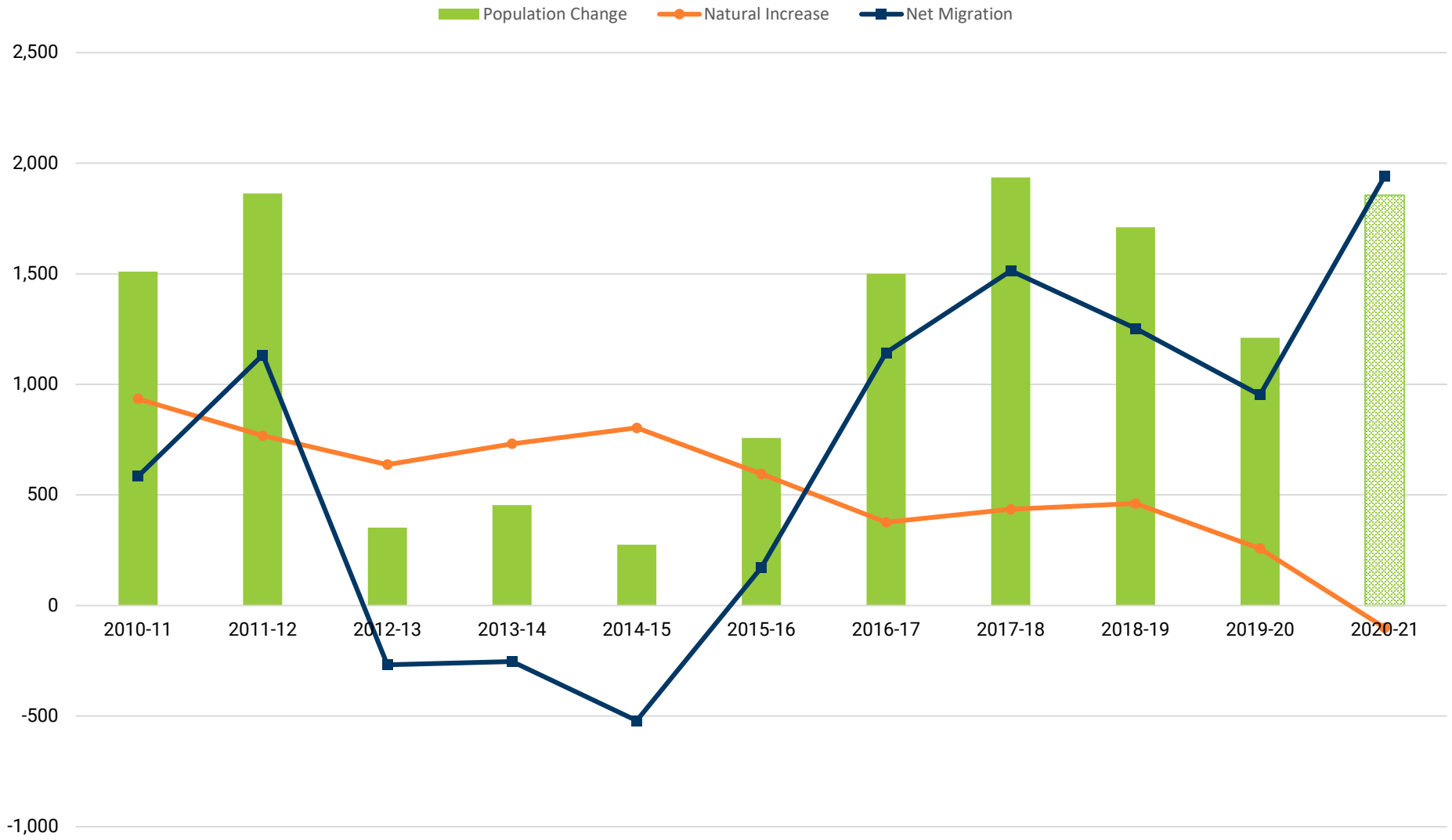
Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Harford County & Baltimore Region - Annual Population Growth Rate



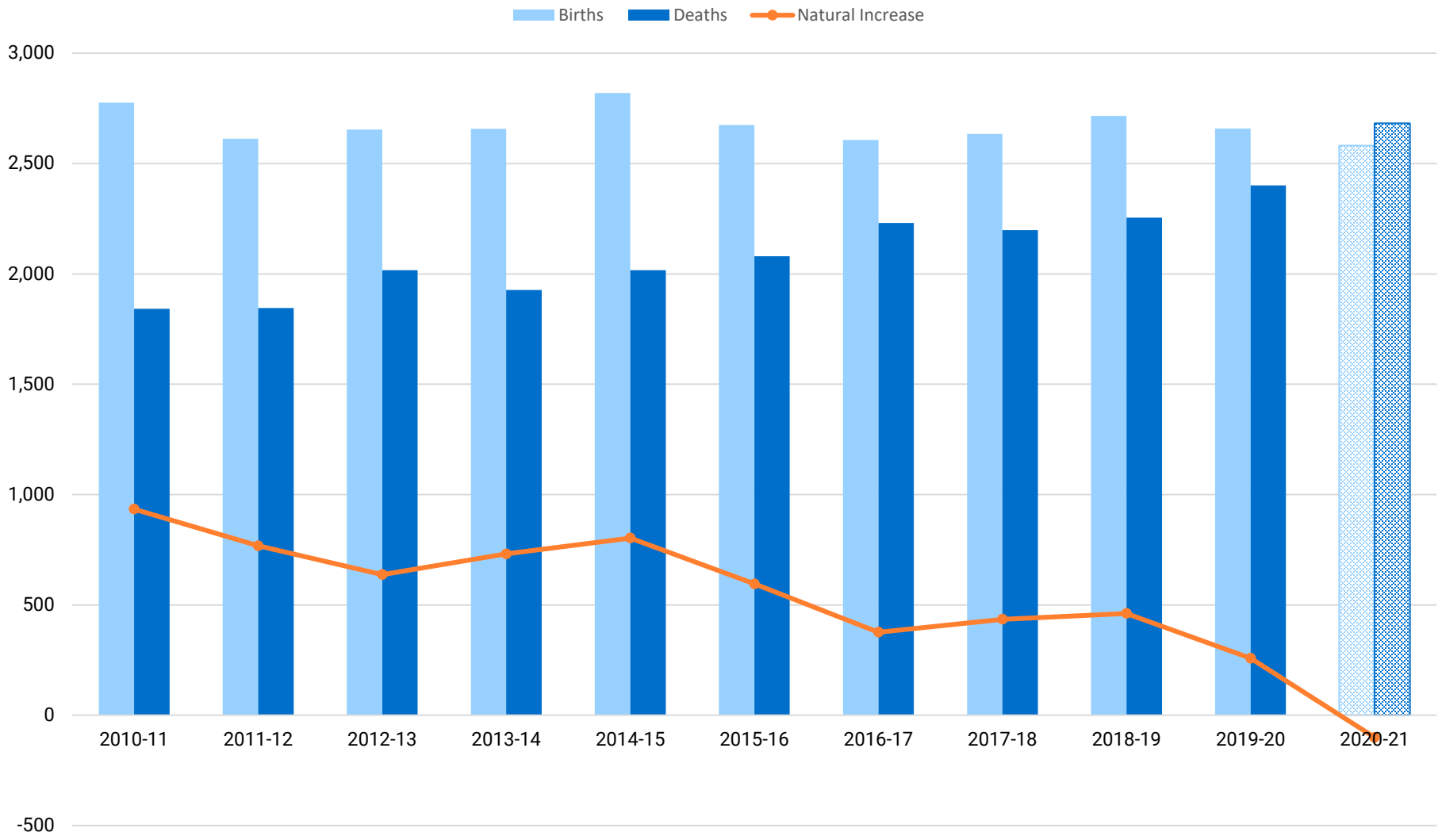
Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Harford County – Components of Population Change



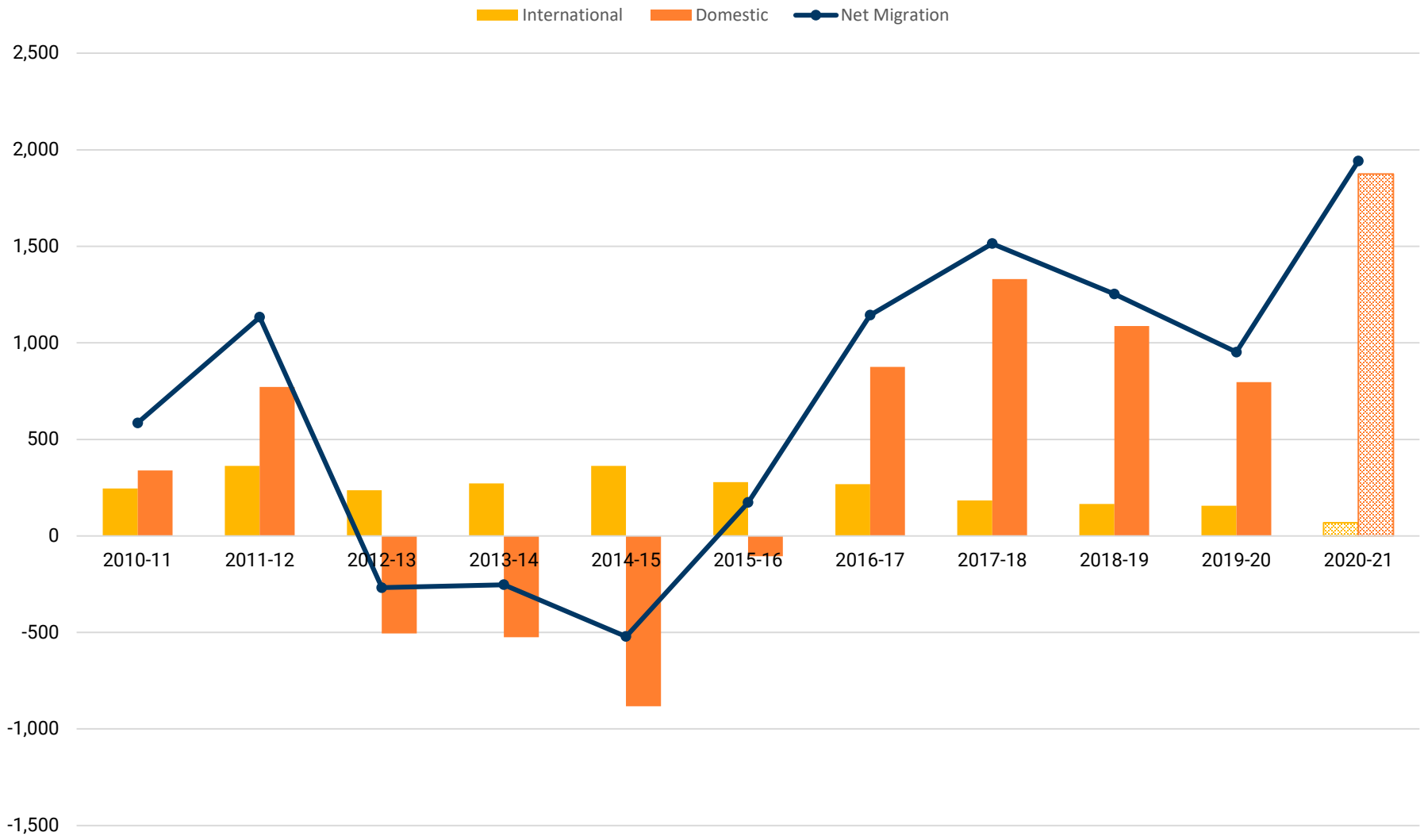
Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Harford County – Natural Increase



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Harford County – Migration



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Howard County

Howard County - Annual Population Change

Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

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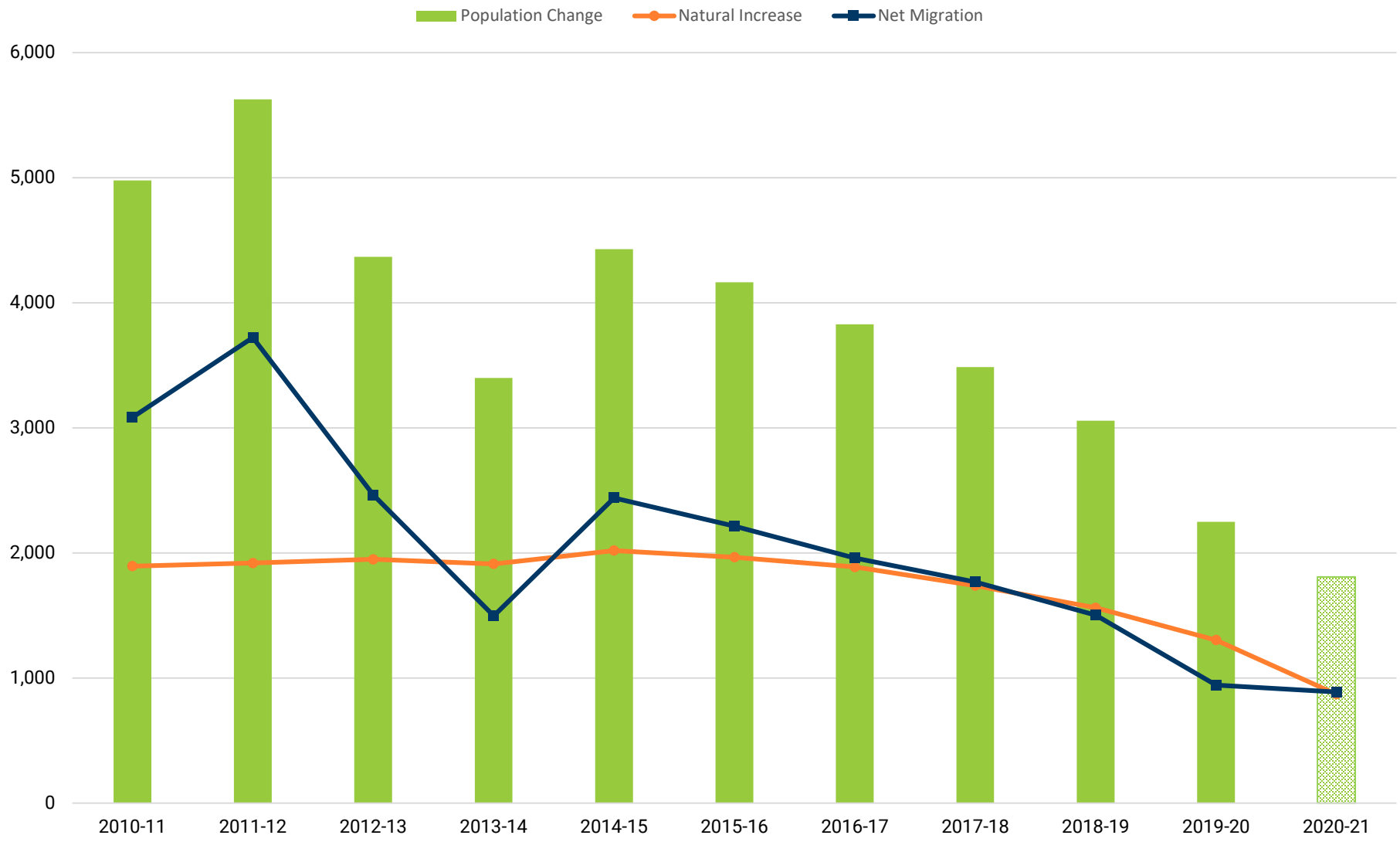
Howard County & Baltimore Region - Annual Population Growth Rate

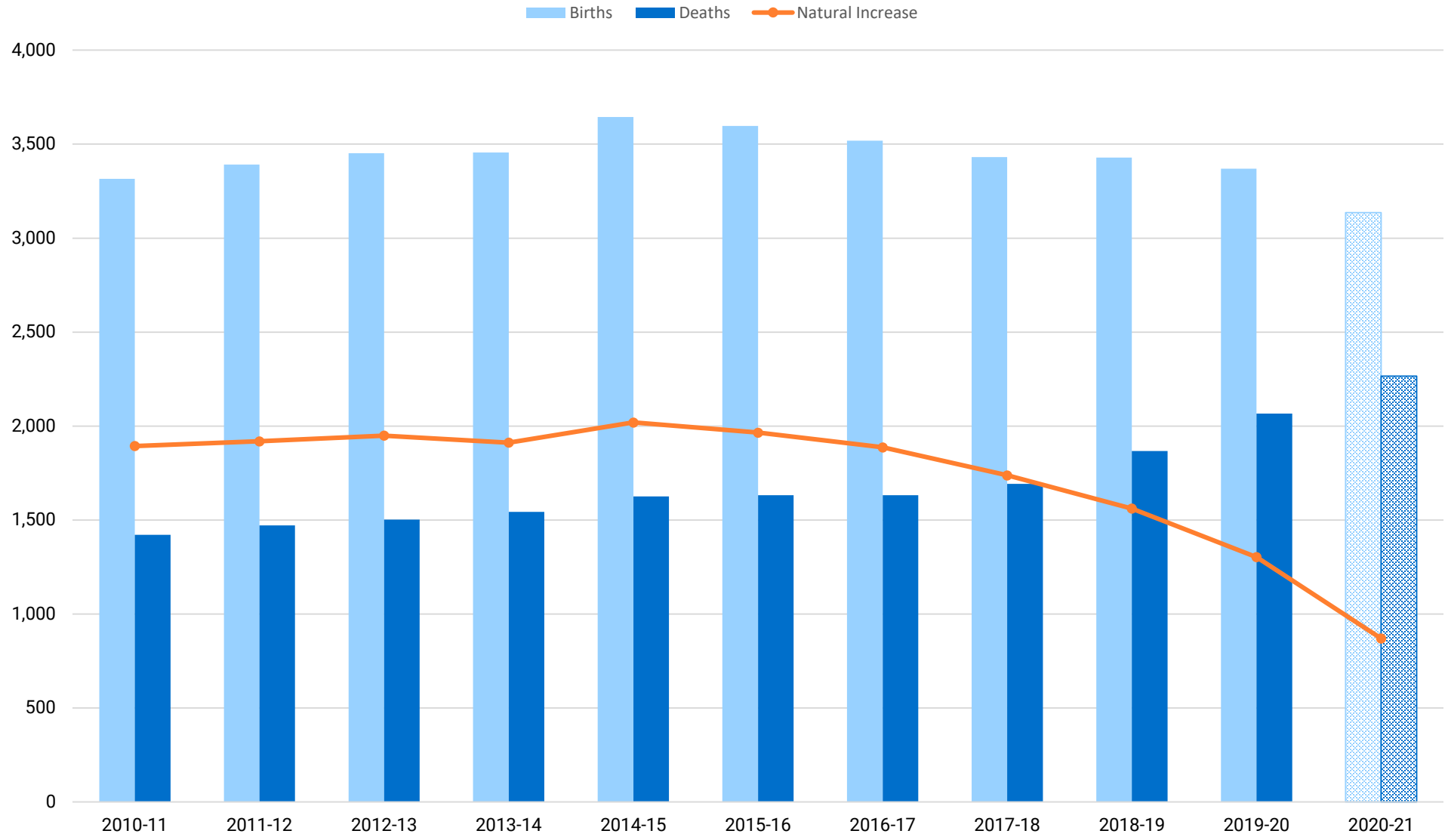
Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Howard County – Components of Population Change



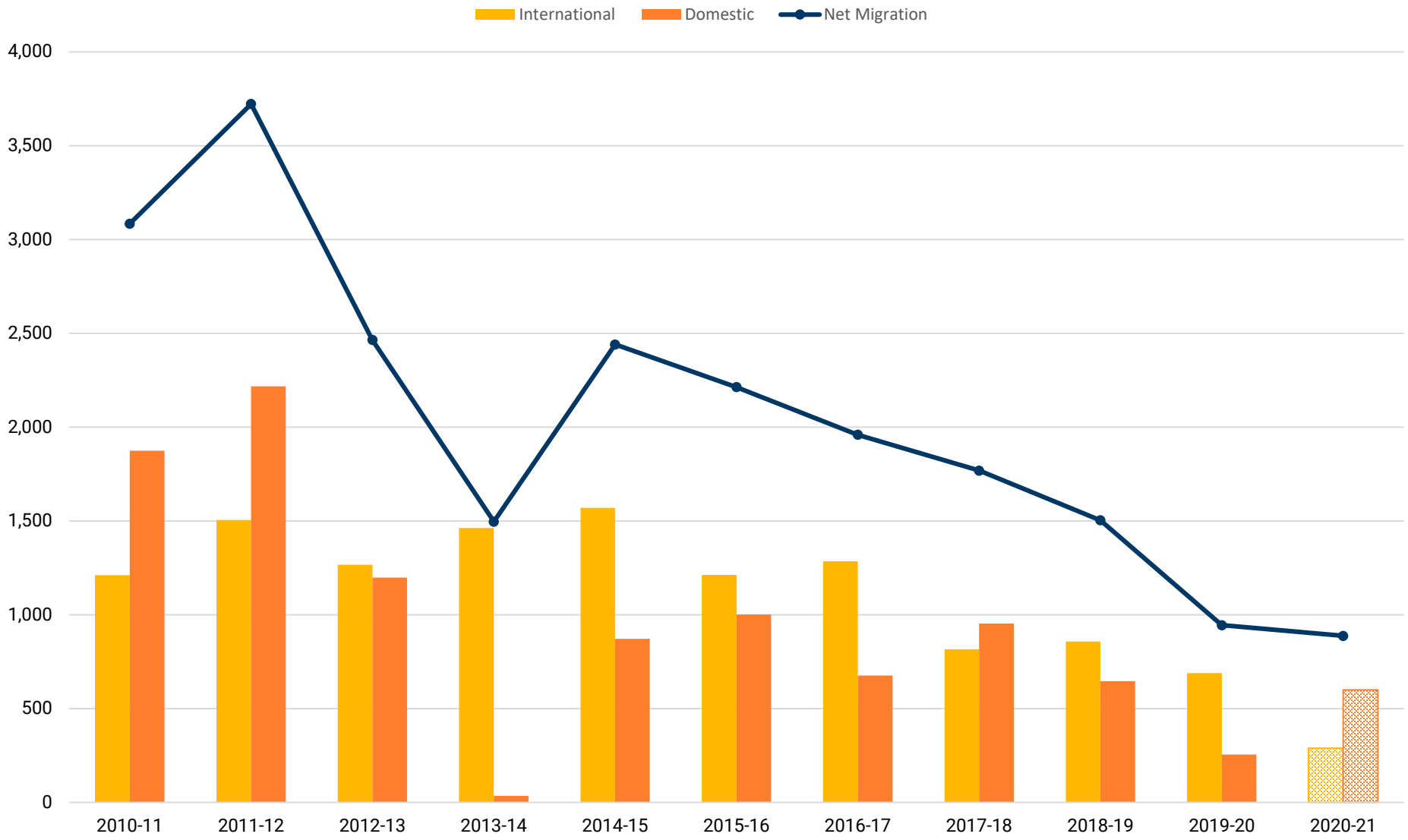
Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Howard County – Natural Increase



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

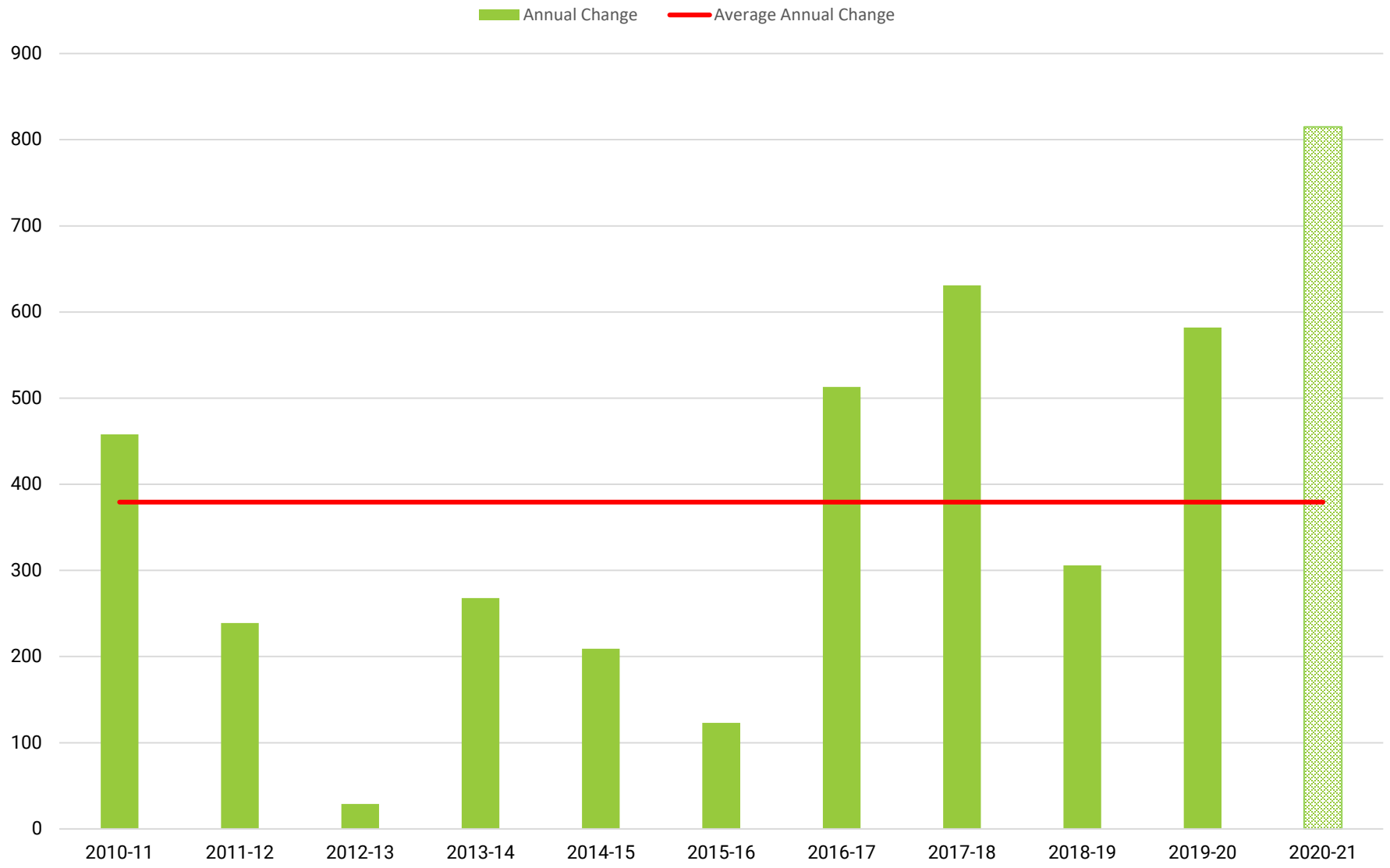
Howard County – Migration



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

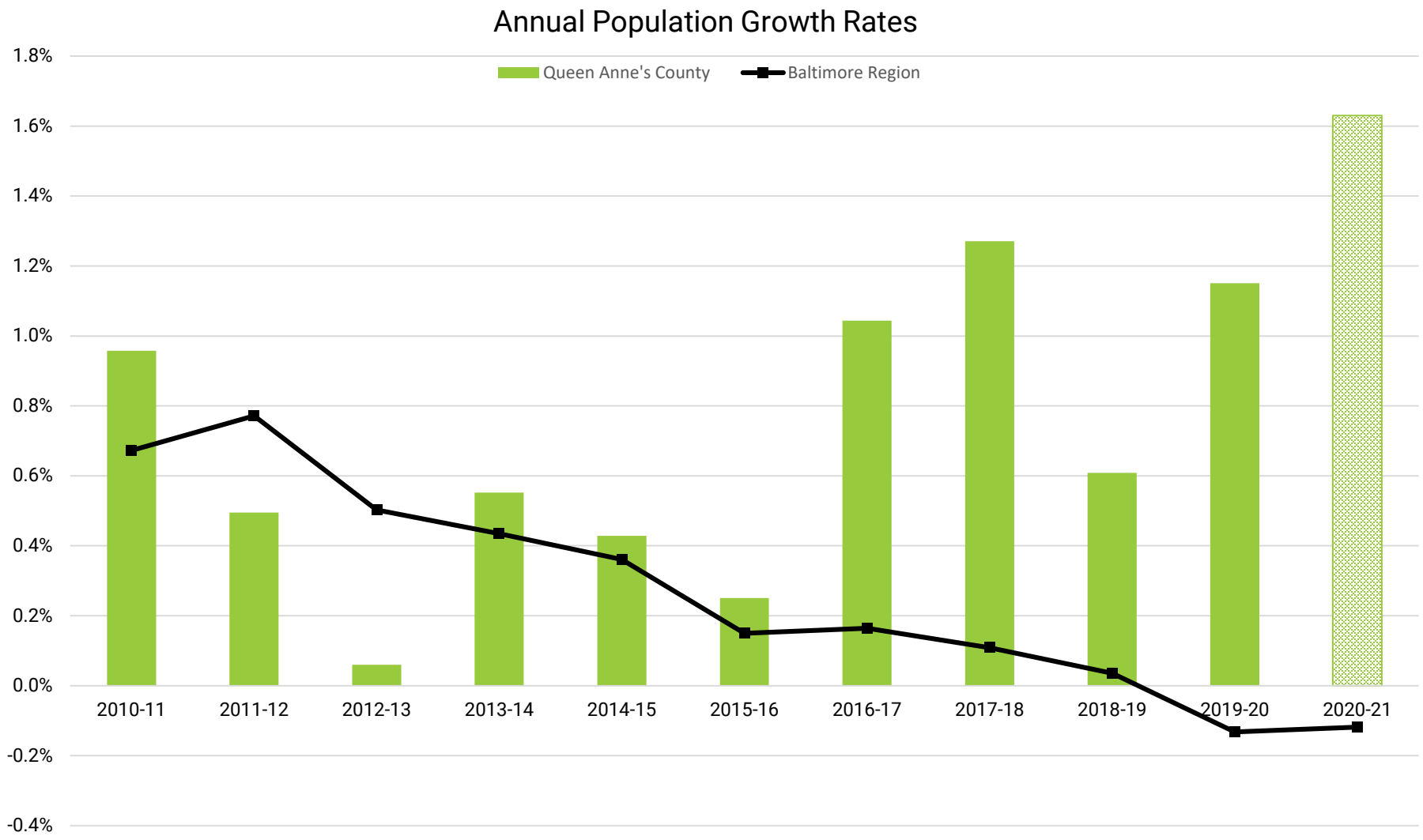
Queen Anne’s County

Queen Anne's County - Annual Population Change



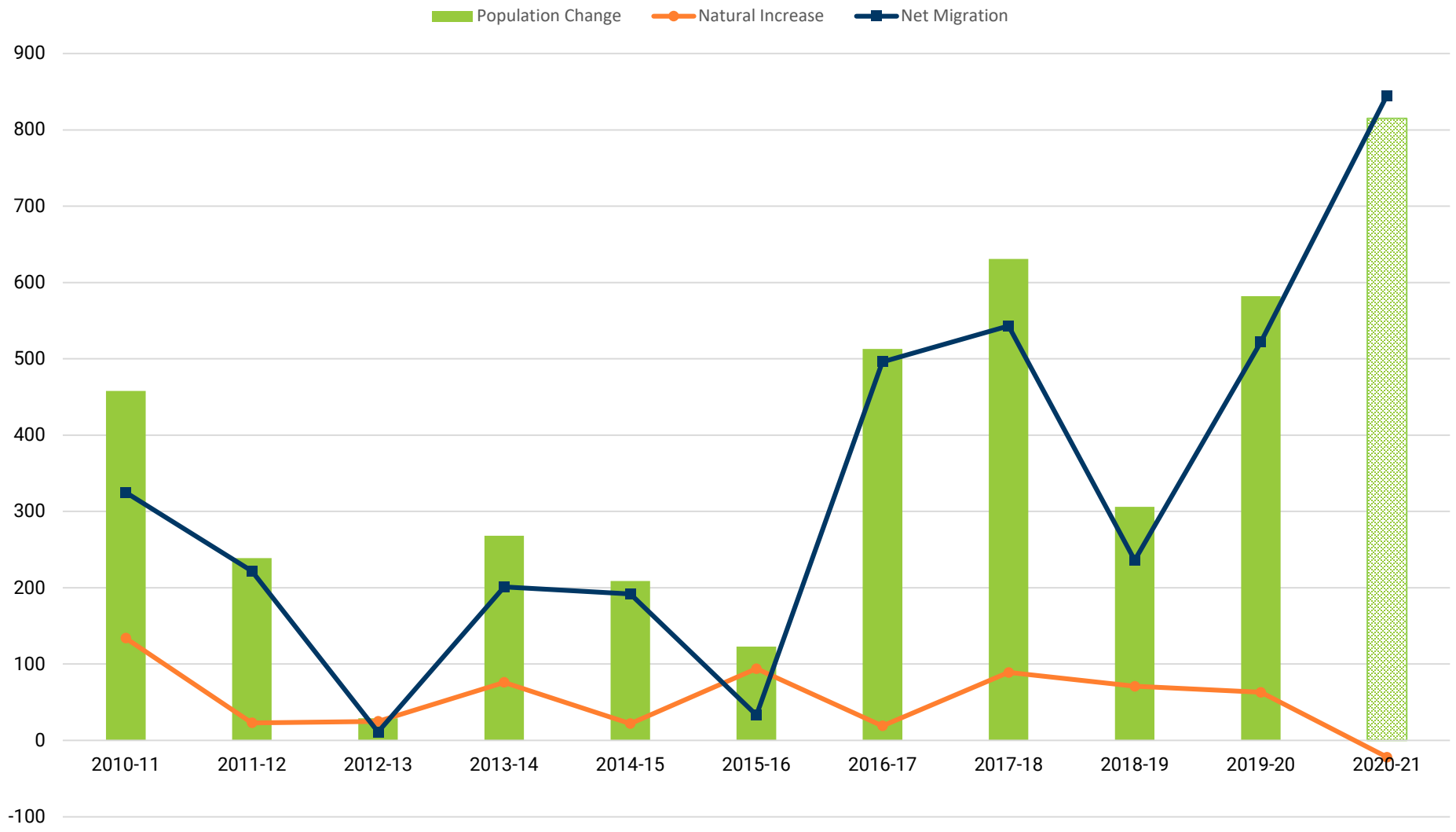
Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Queen Anne's County & Baltimore Region - Annual Population Growth Rate



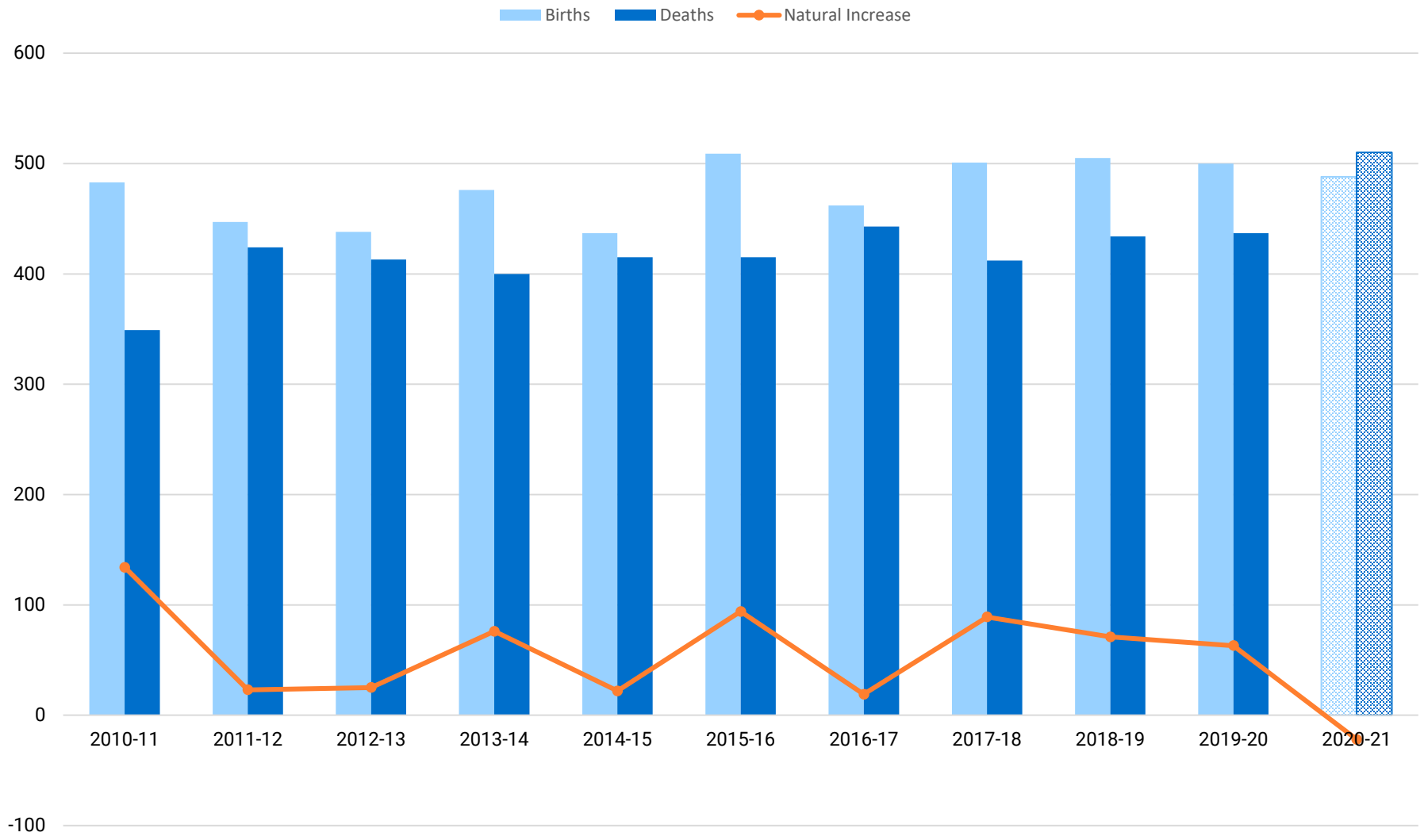
Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Queen Anne's County – Components of Population Change



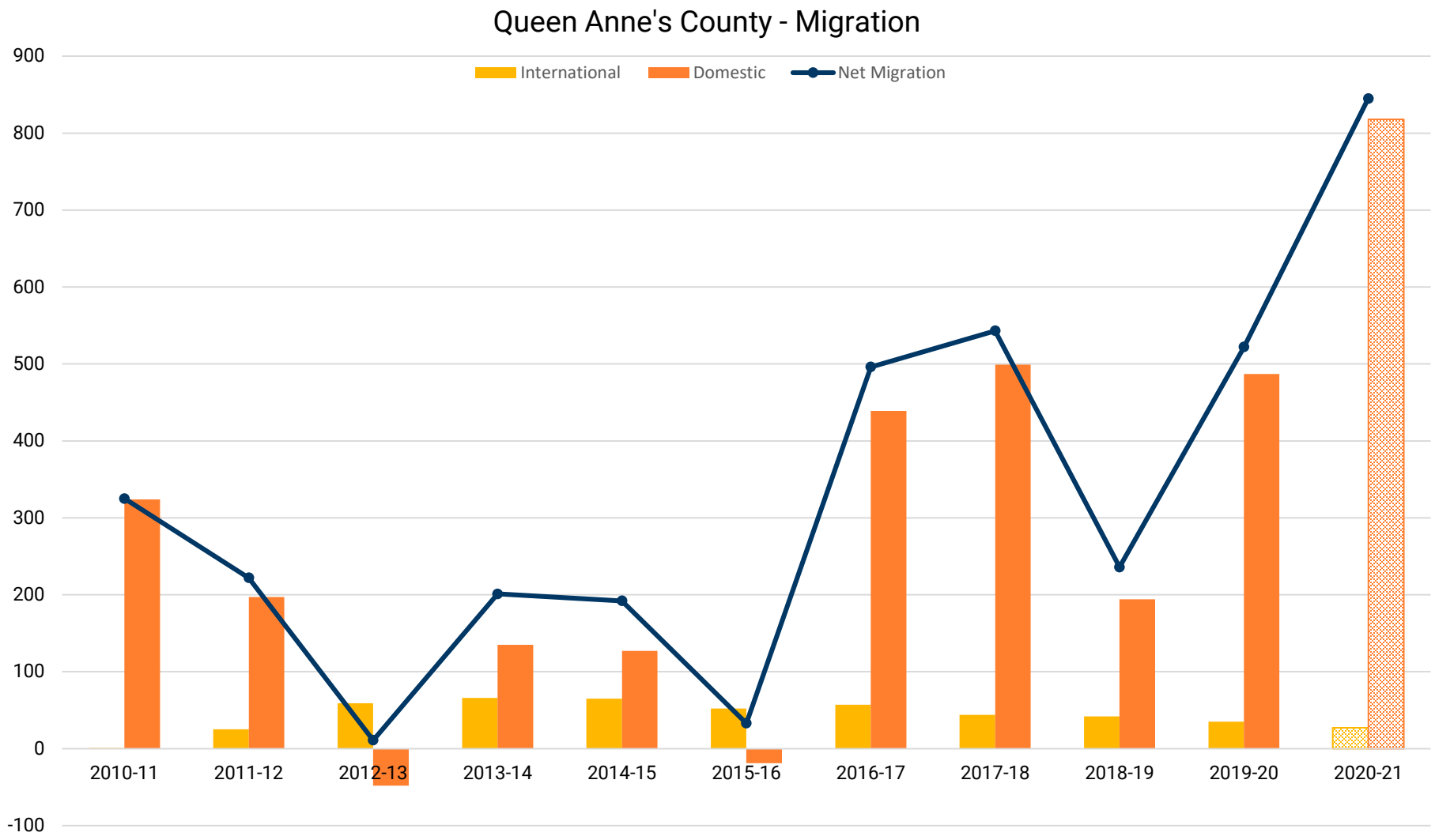
Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Queen Anne's County – Natural Increase



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

Queen Anne’s County – Migration



Source: U.S. Census Bureau, Population Estimates Program (v2020 and v2021).

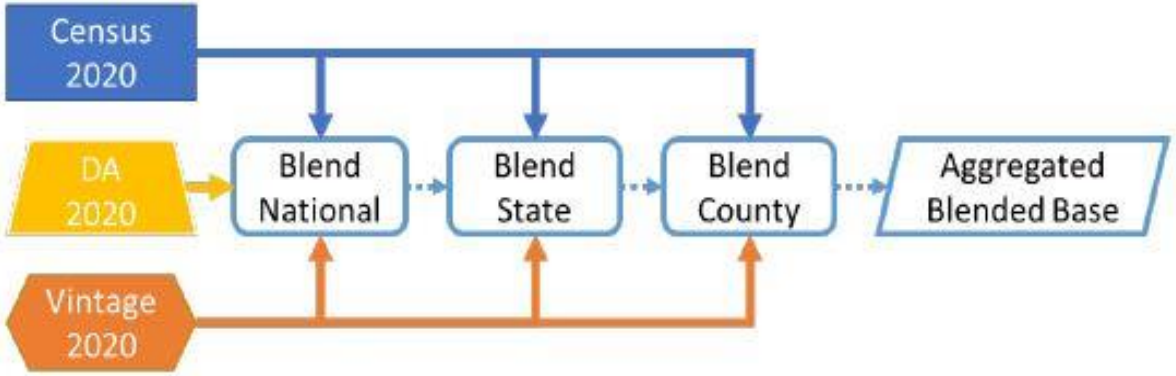
PEP v2021 Notes

Methods and Source Adjustments: PEP (v2021)

- **Challenges in development of base-year data**
  - Disclosure Avoidance System applied to 2020 decennial census data;
  - COVID-19 caused delays in Census data collection and processing schedules;
  - PEP staff did not have the data/time to determine suitability of 2020 decennial census data for the specific use case (full-detail estimates base population)

- **Development of a "Blended Base" for vintage 2021**

Figure 1. Blended Base Process for the Nation, States, and Counties



Source: U.S. Census Bureau

Methods and Source Adjustments: PEP (v2021)

- **Changes/Adjustments by Component?**
  - Total Population (Calibrated to 2020 Decennial Census)
  - Natural Increase (vital statistics: births, deaths)
  - Migration
    - Domestic
    - International – Challenges with 2020 ACS data collection and quality. Census needed to make adjustments to methods/sources.
- **Challenges with other PEP products (Pop by Age/Sex/Race/Hispanic)**
  - PEP utilized the national level DA for age (by single-year) and sex distributions
  - PEP utilized vintage 2020 estimates and DA to “fill-in” the detail for race and Hispanic origin
- **Implications for future PEP vintages?**

For More Information

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