



NVAR FINANCE SUMMIT

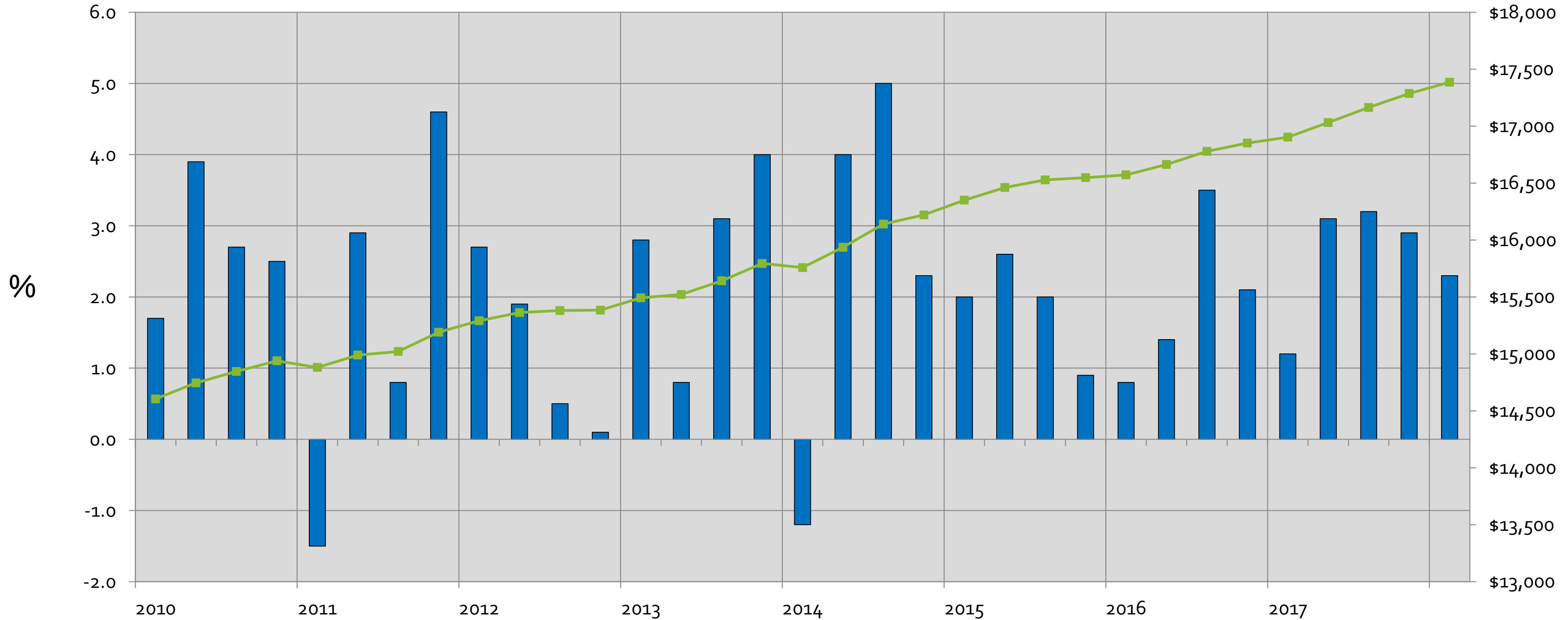
*Washington Area Economy and Housing
Market: Performance and Outlook
NVAR Economic Summit*

Terry L. Clower, Ph.D.
Northern Virginia Chair & Professor of Public Policy
Director, Center for Regional Analysis
Schar School of Policy and Government
George Mason University

May 23, 2018

U.S. Gross Domestic Product

■ Quarterly Change ■ Real GDP (Billions)



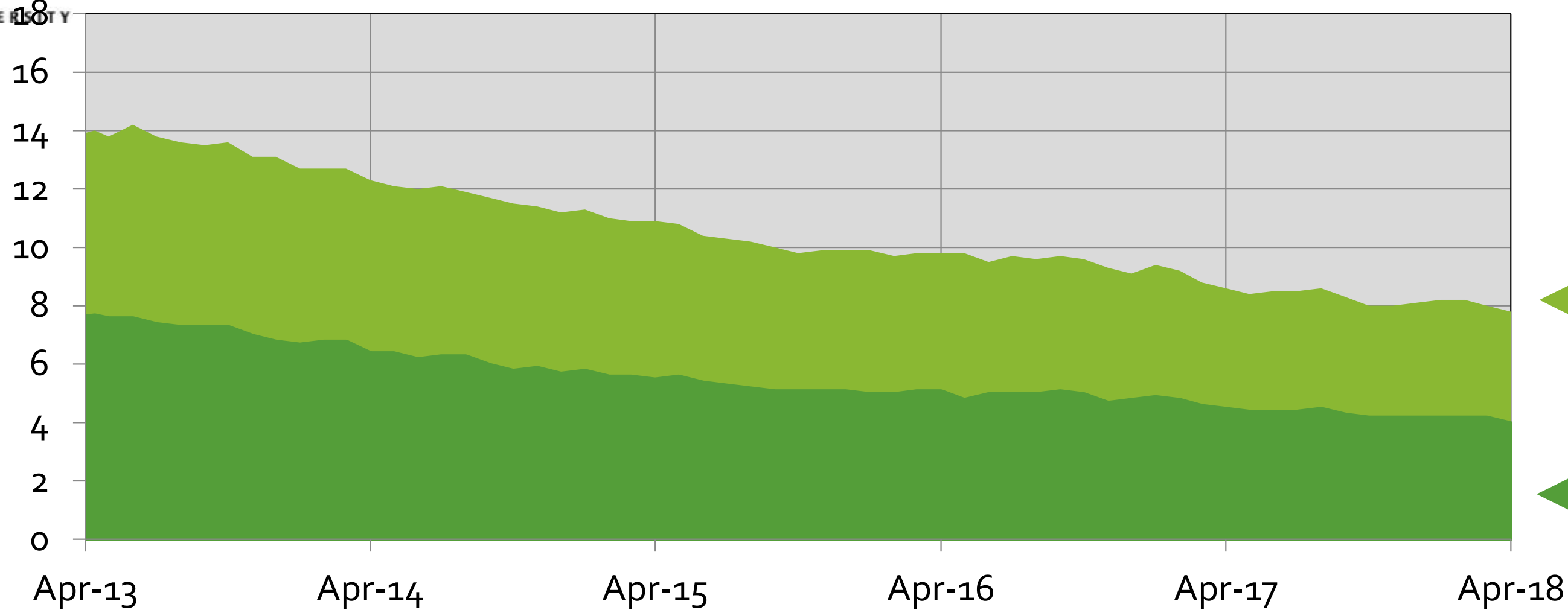
2017 +2.3%

2018Q1 +2.3%

Source: Bureau of Economic Analysis (Seasonally Adjusted, Chained 2009 Dollars)

U.S. Unemployment

U-6
UR

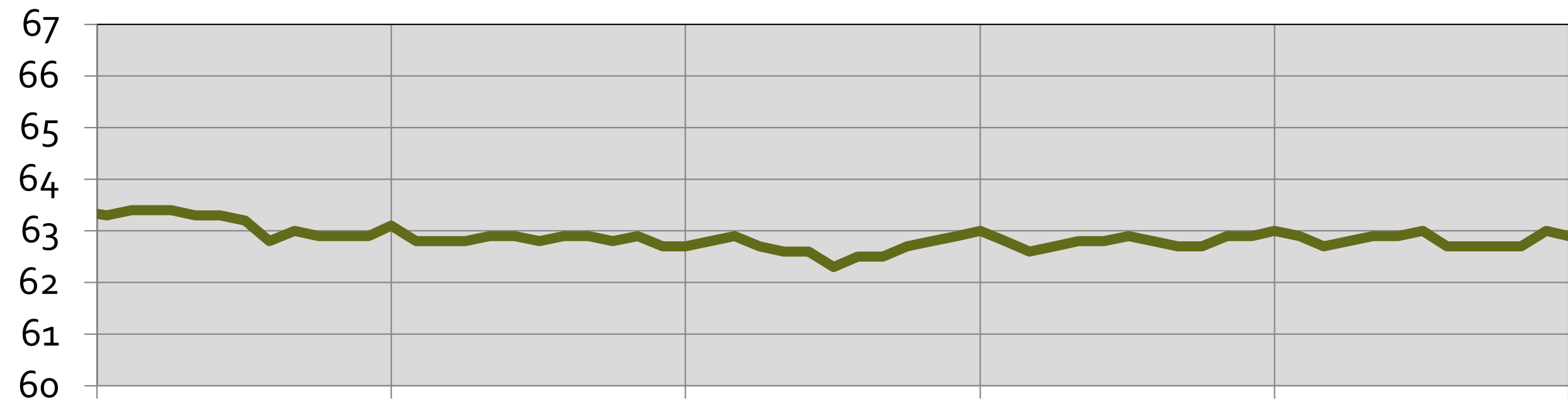


April
8.0%

April
3.9%

Apr17
to
Apr18
U-6
-0.8%
UR
-0.5%

LFPR

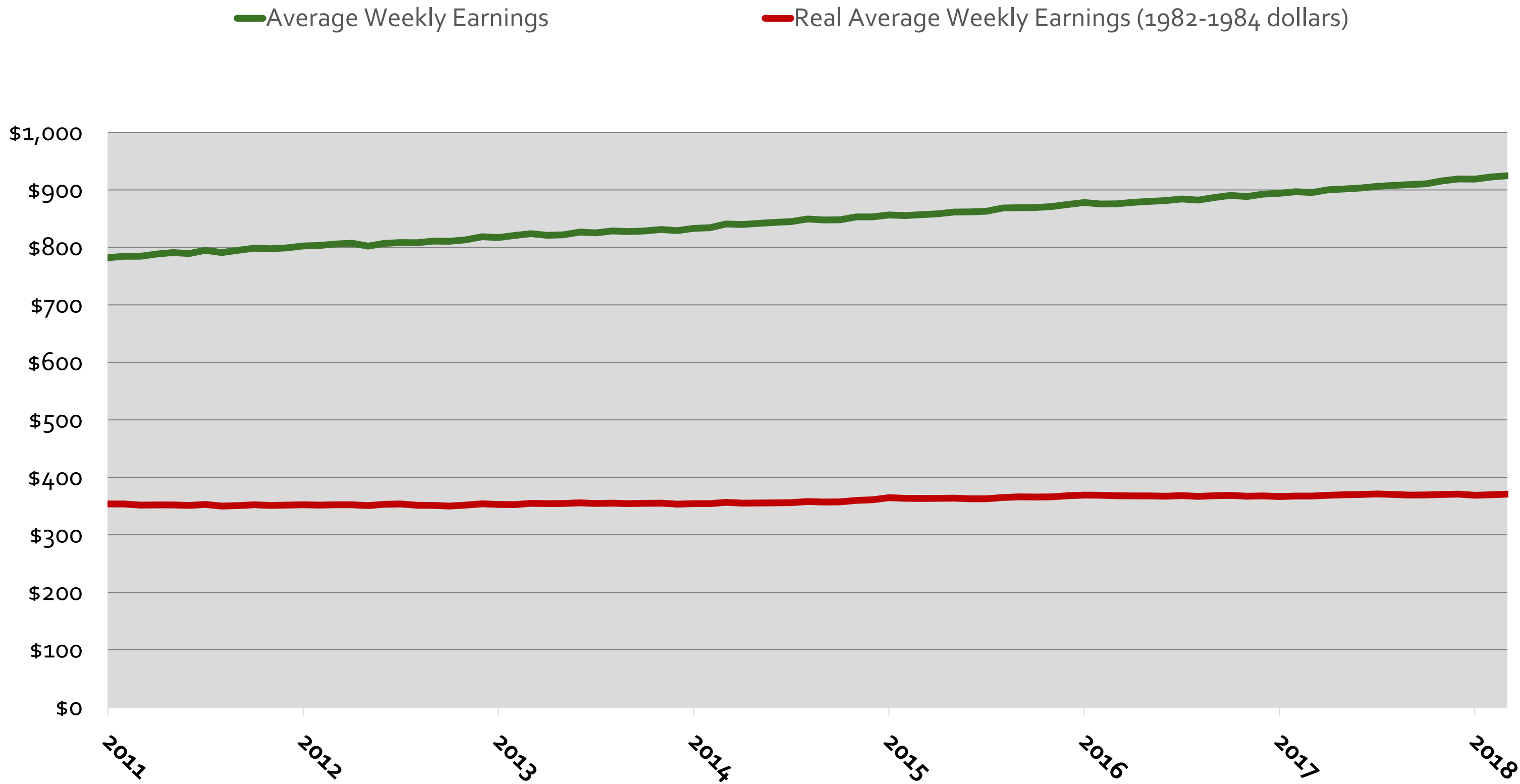


April
62.8%

Source: Bureau of Labor Statistics (Seasonally Adjusted)

Average Weekly Earnings

U.S., Total Private, Across all Industries



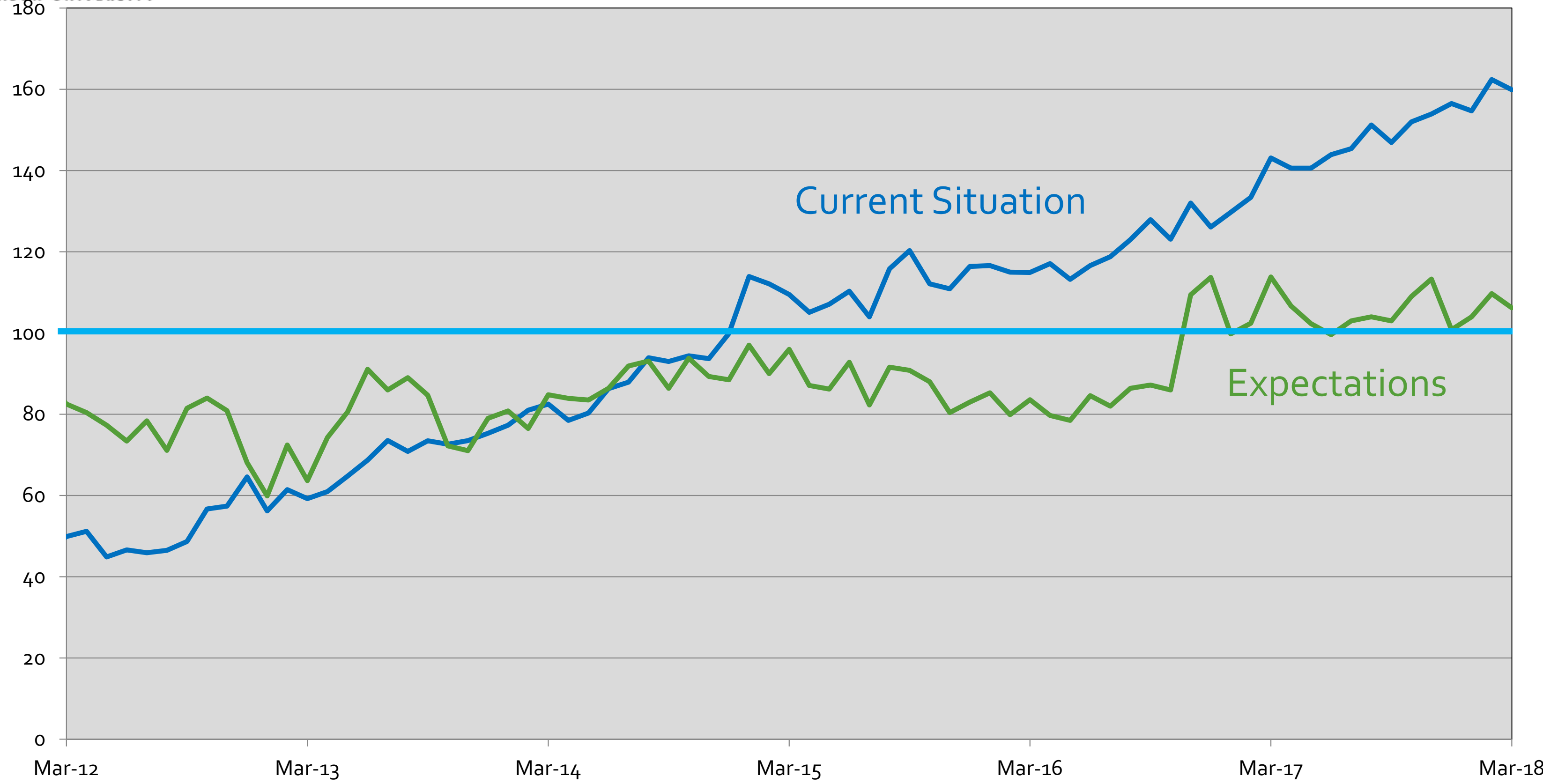
↑

Apr 17 – Apr 18
Avg Hourly Wages
+2.2%

Apr 17 – Apr 18
Avg Weekly
Earnings +2.8%

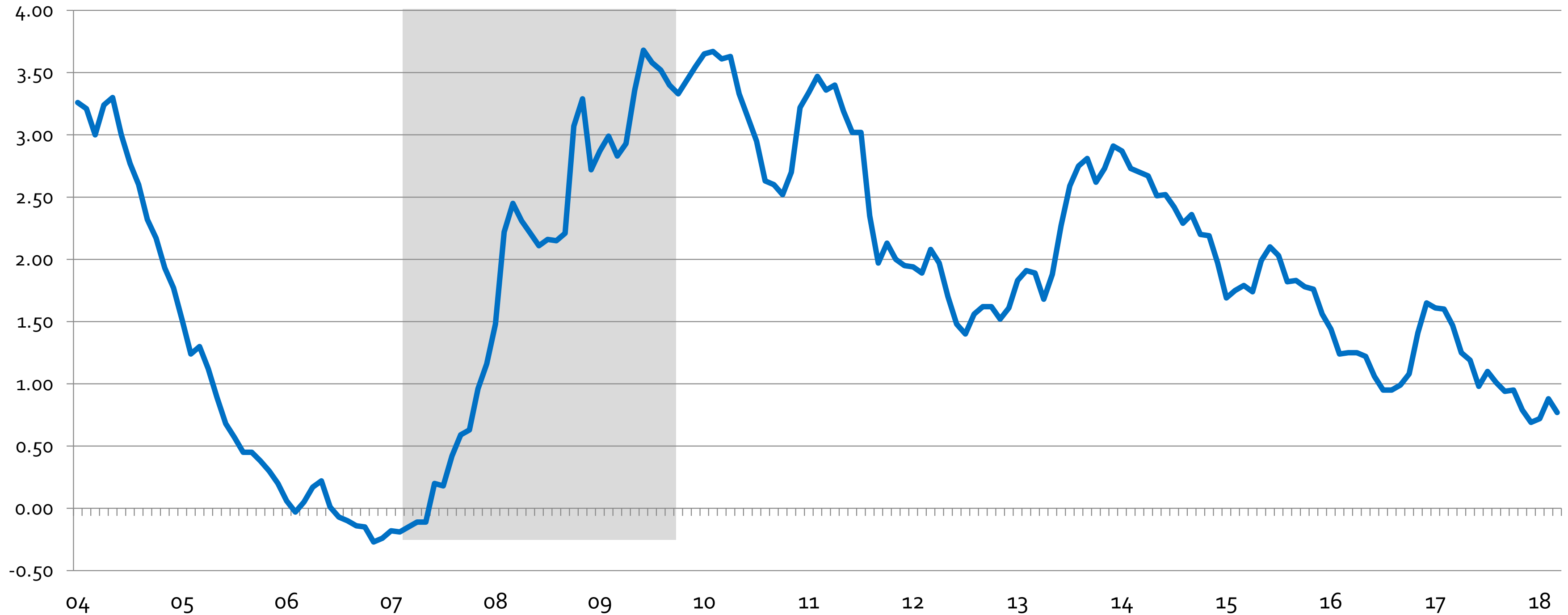
Apr 17 – Apr 18
Real Avg Weekly
Earnings +0.4%

Consumer Confidence



March 2018
 Cur. = 159.9
 Exp. = 106.2
 (1985 = 100)

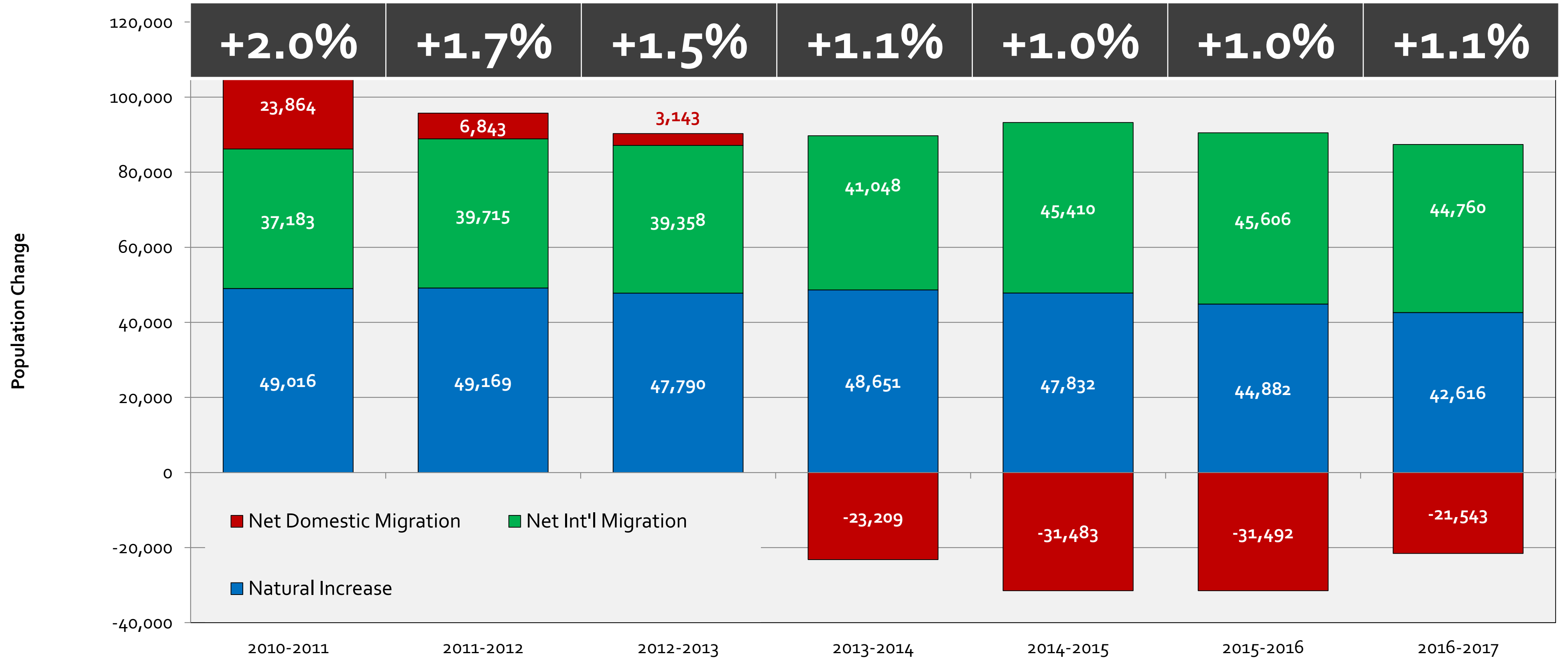
10-yr./1-yr. yield spread



Source: U.S. Treasury, Yield Curve for Treasury Nominal Coupon Issues (TNC yield curve), which is derived from Treasury nominal notes and bonds

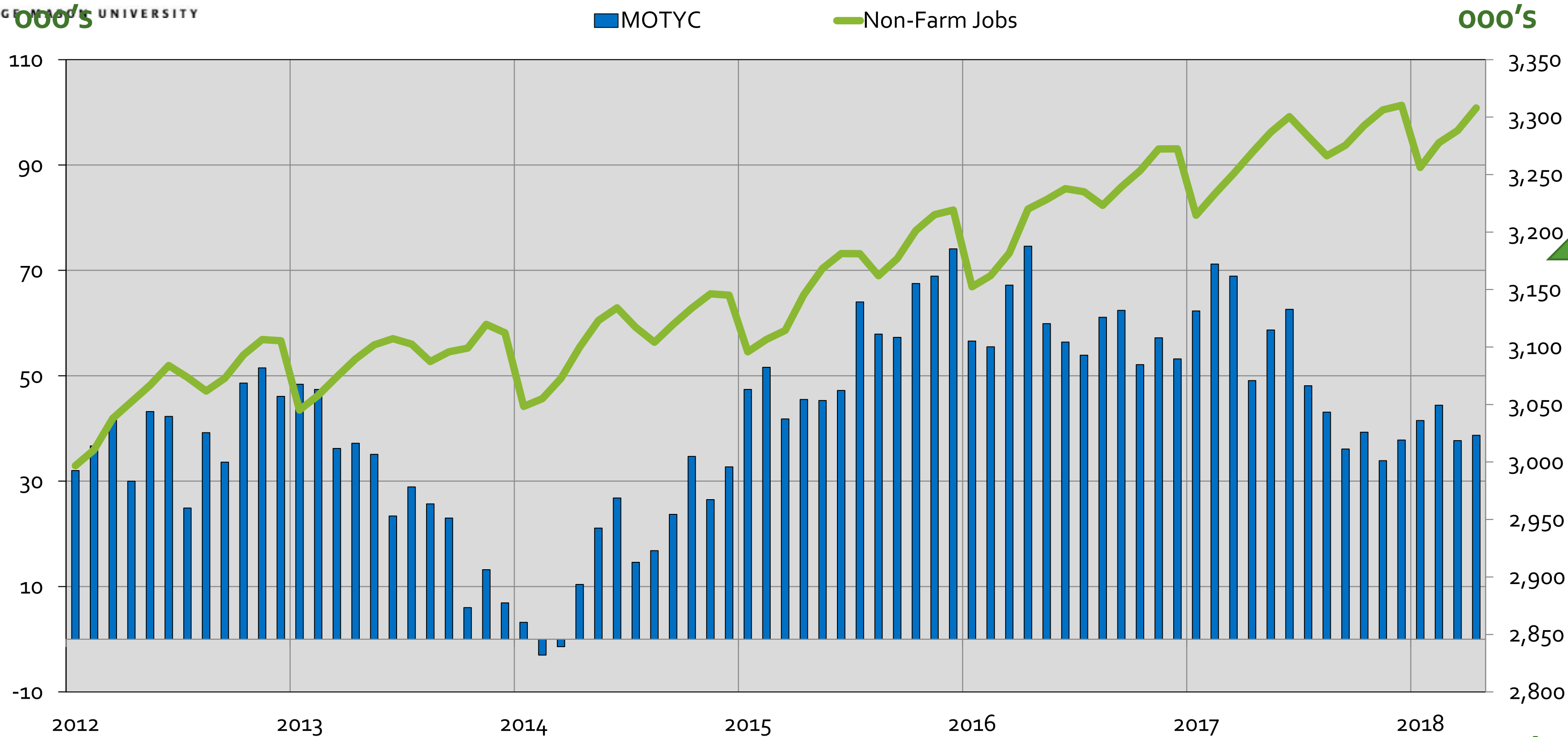
The Washington Economy

Elements of Population Change Washington MSA



Source: US Census Bureau, Population Estimates Program, V2017

Annual Job Change - Washington MSA



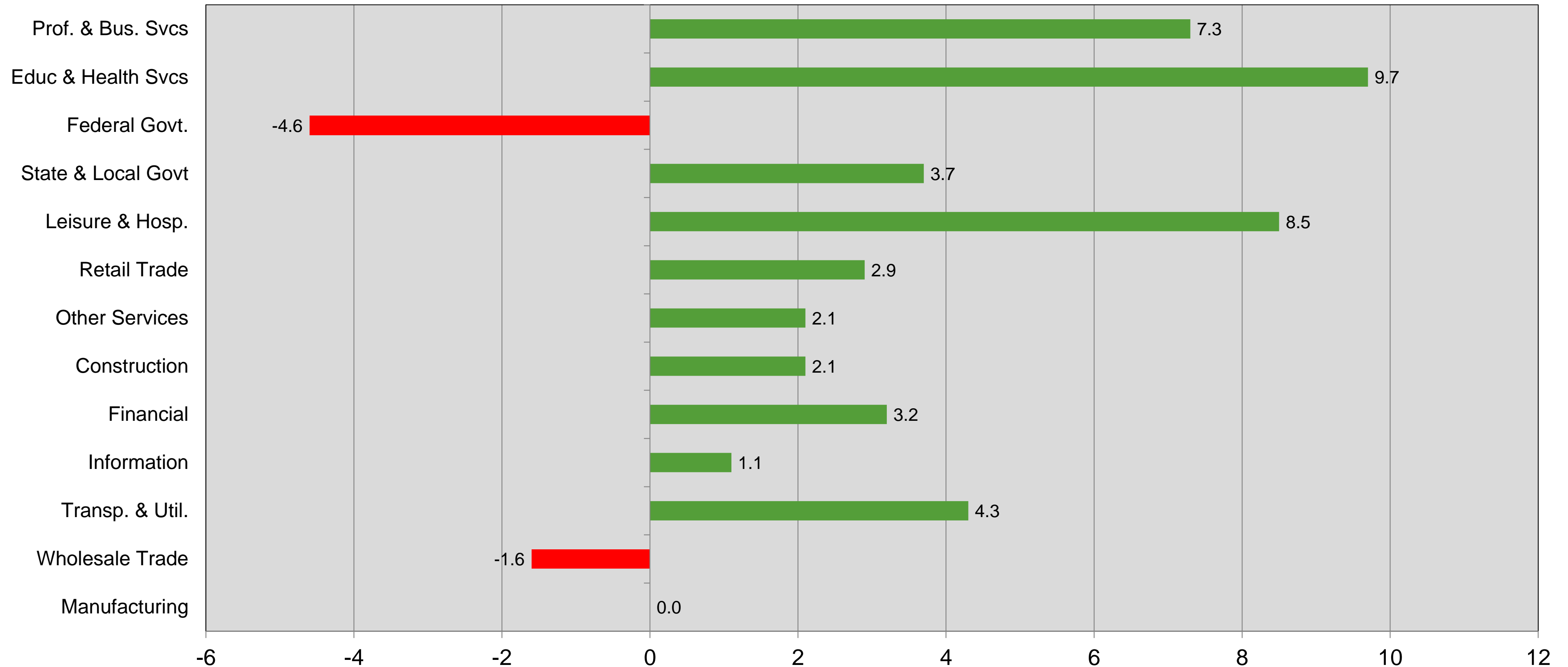
Apr 17-
Apr 18
+38.7 K

April-18
Total: 3,308 K

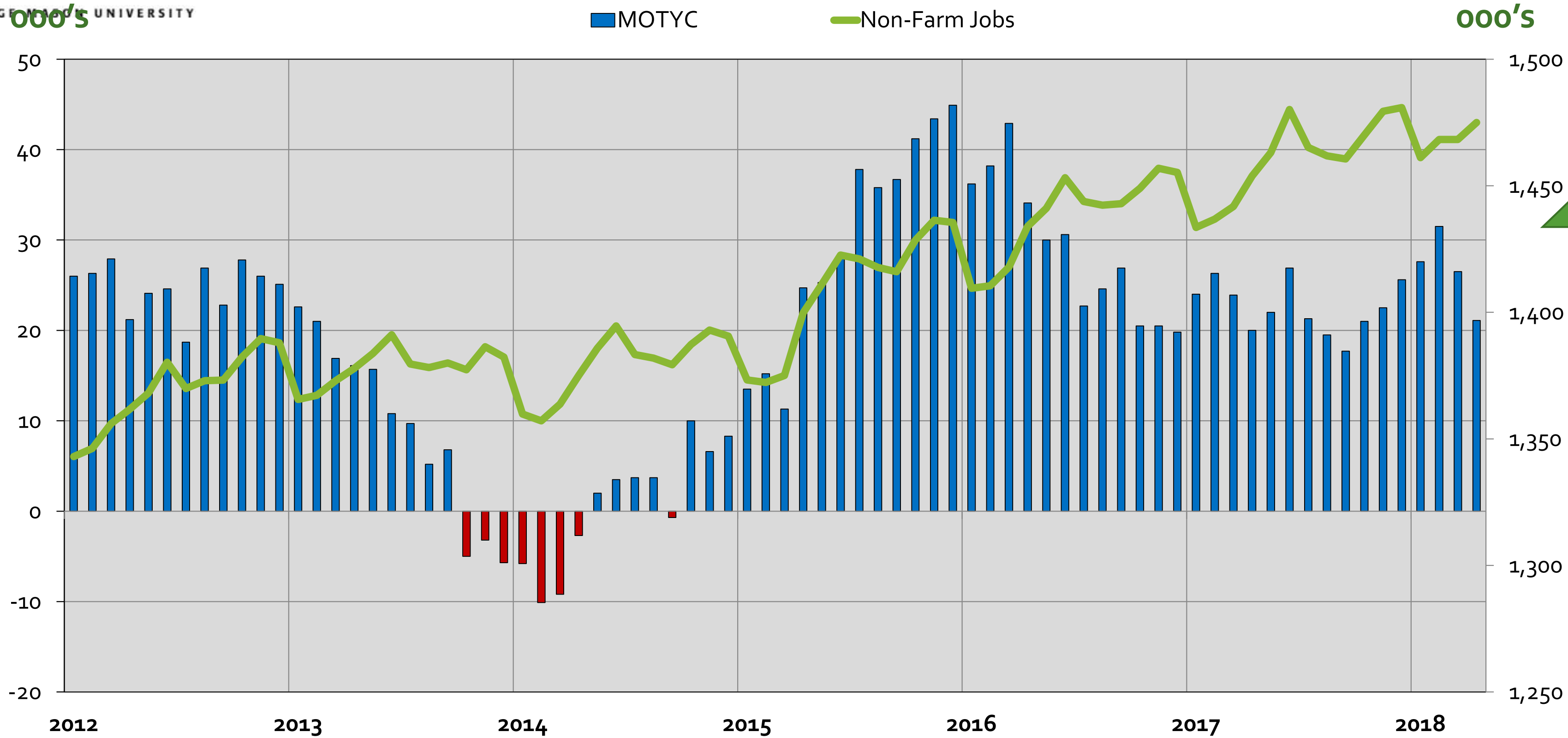
Job Change by Sector April 2017 – April 2018 Washington MSA (000s)

(Ranked by Size in 2017)

Total = 38,700



Annual Job Change – Northern VA



**Apr 17-
 Apr 18
 +21.1K**

**April-18
 Total: 1,475 K**

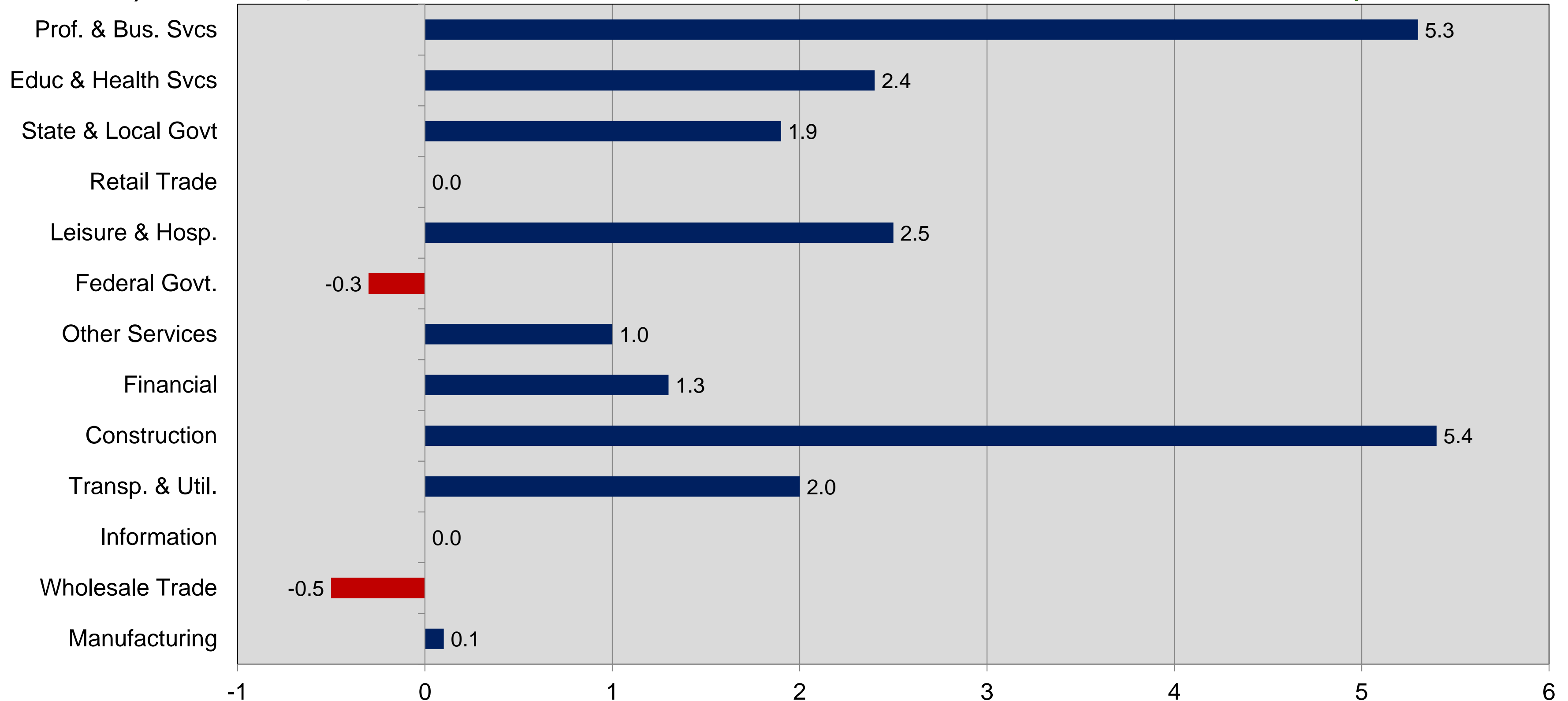
Source: Bureau of Labor Statistics (Not Seasonally Adjusted), GMU Center for Regional Analysis

Job Change by Sector Apr 2017 – Apr 2018 Northern Virginia

(Ranked by Size in 2017)

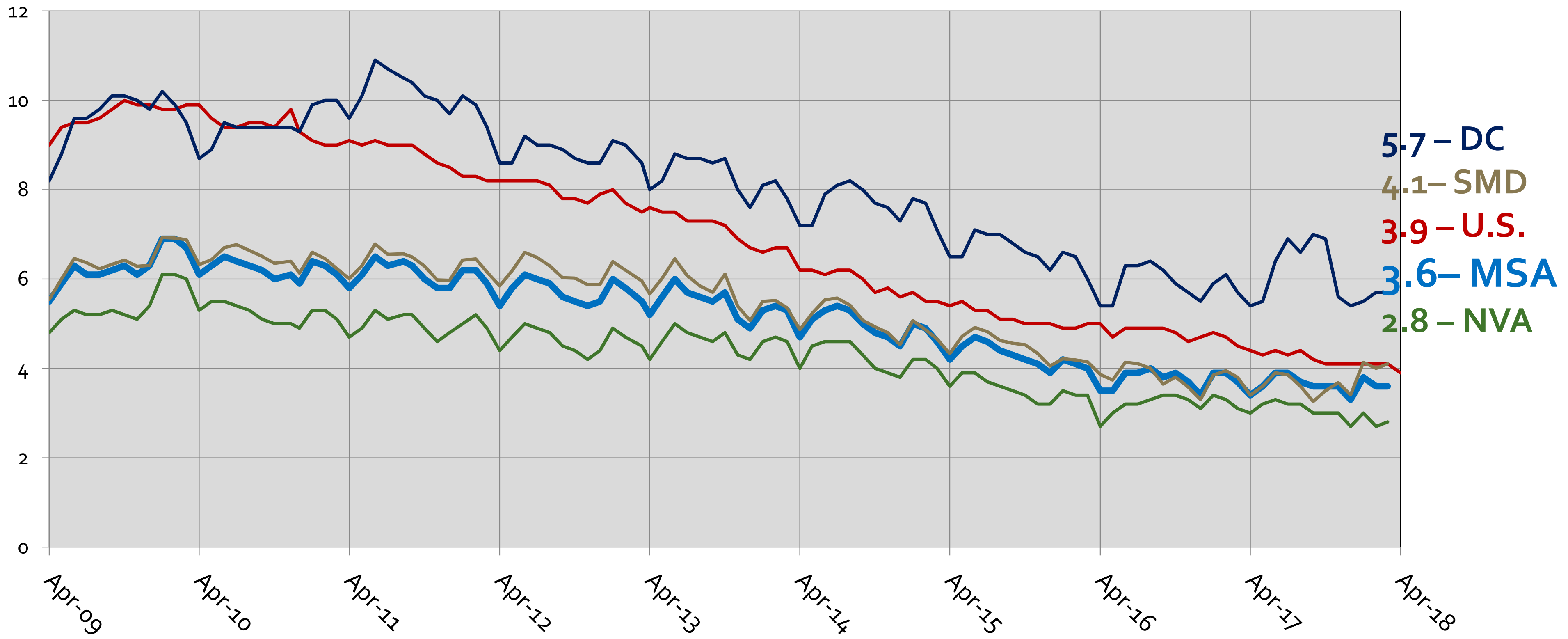
(000s)

Total 21,100



Source: Bureau of Labor Statistics (Not Seasonally Adjusted), GMU Center for Regional Analysis

Unemployment Rates in the WMSA By Sub-State Area

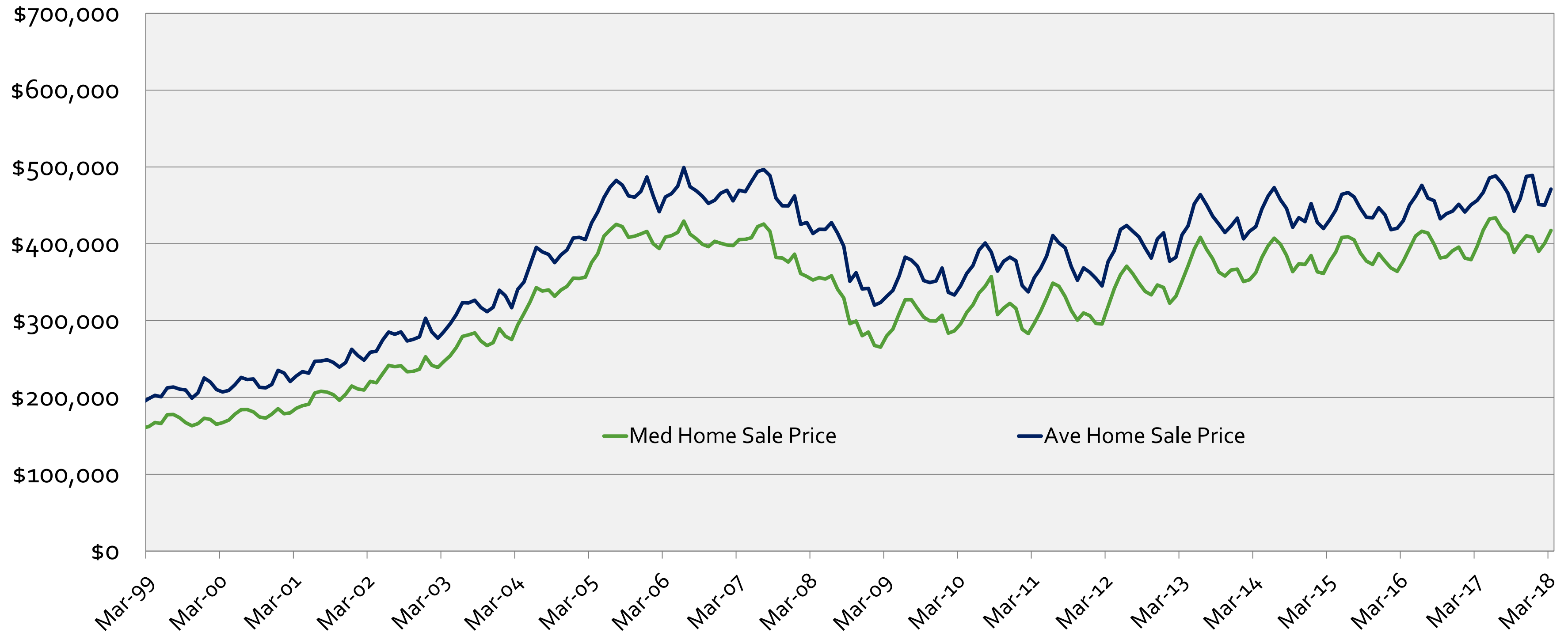


Source: Bureau of Labor Statistics (Region - Not Seasonally Adjusted, US – Seasonally Adjusted)

Washington Area and NVAR Region Housing Trends

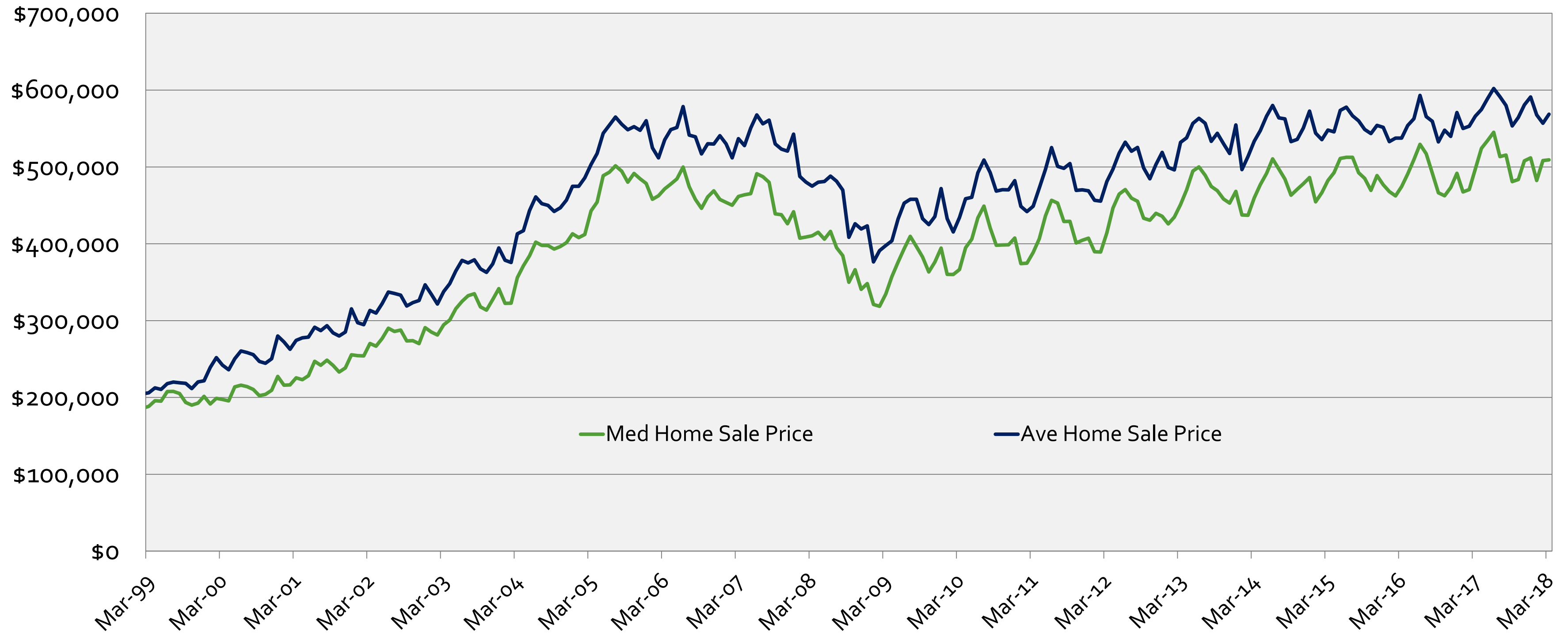
Home Sale Price

Washington MSA

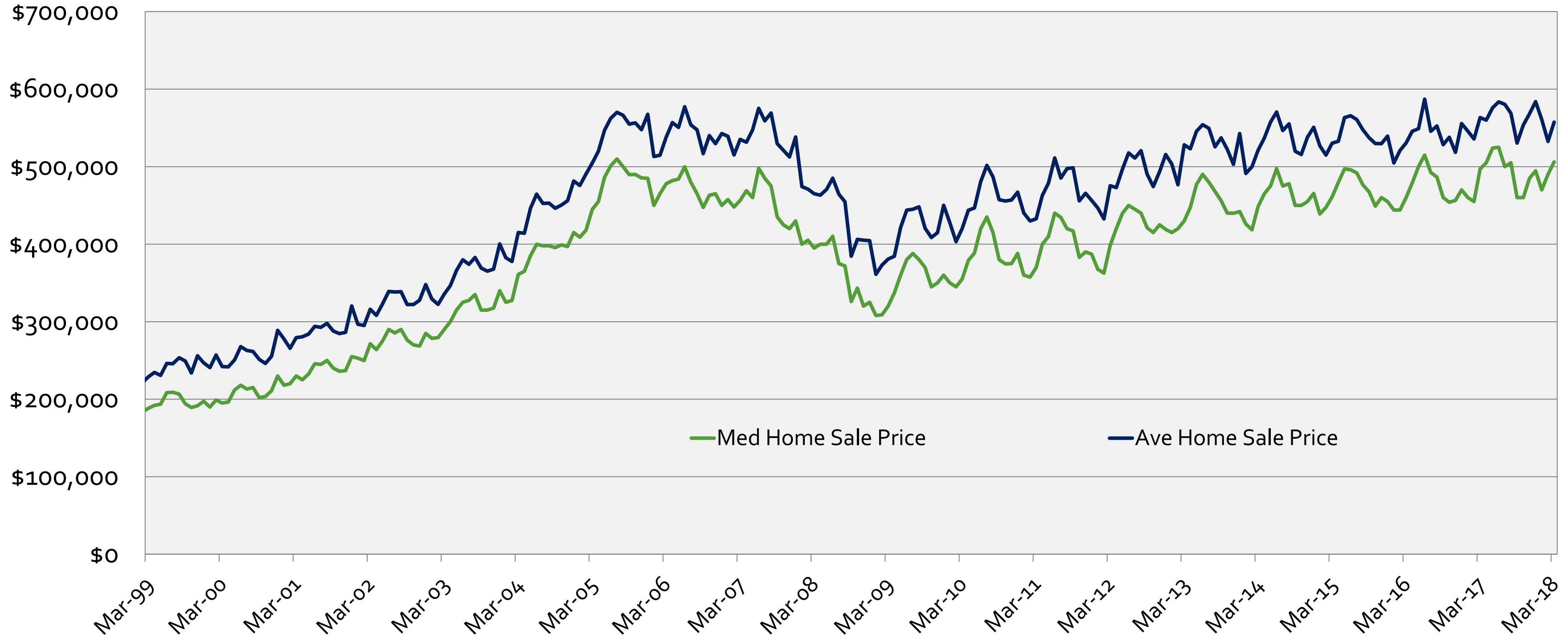


Home Sale Price

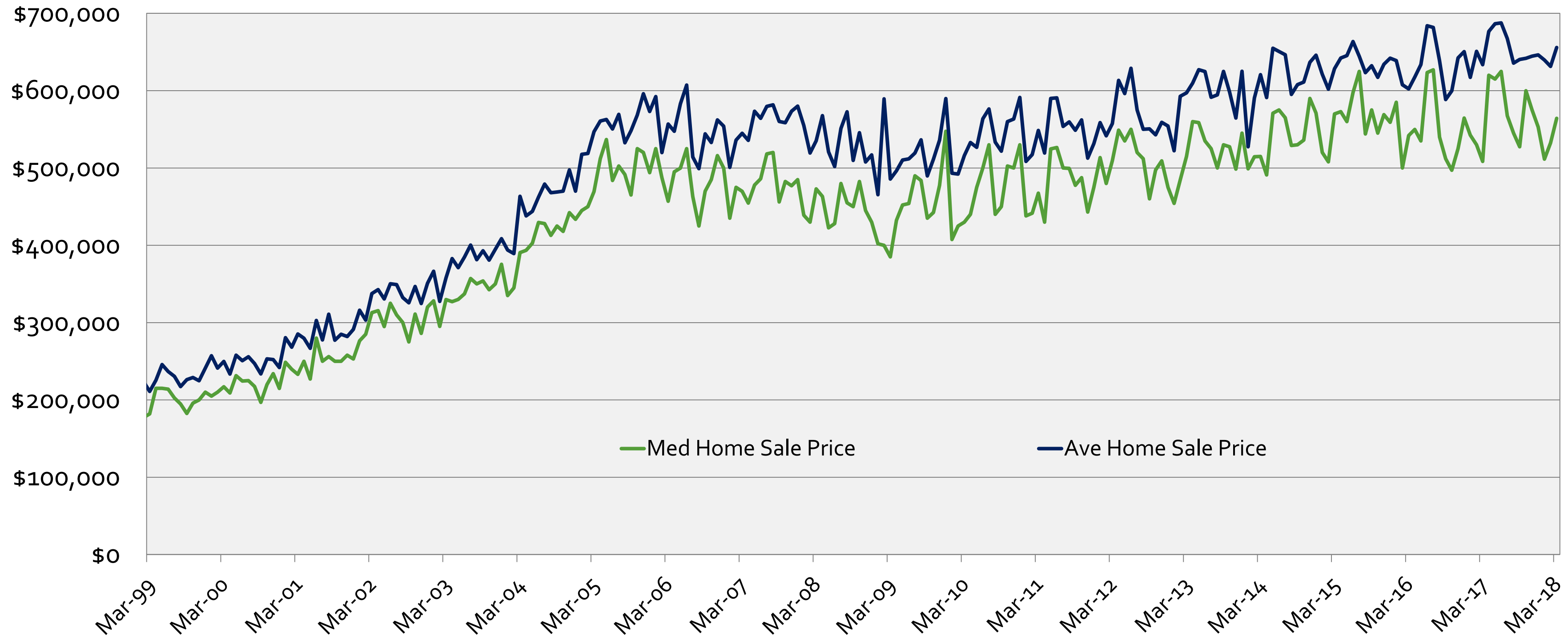
NVAR Region



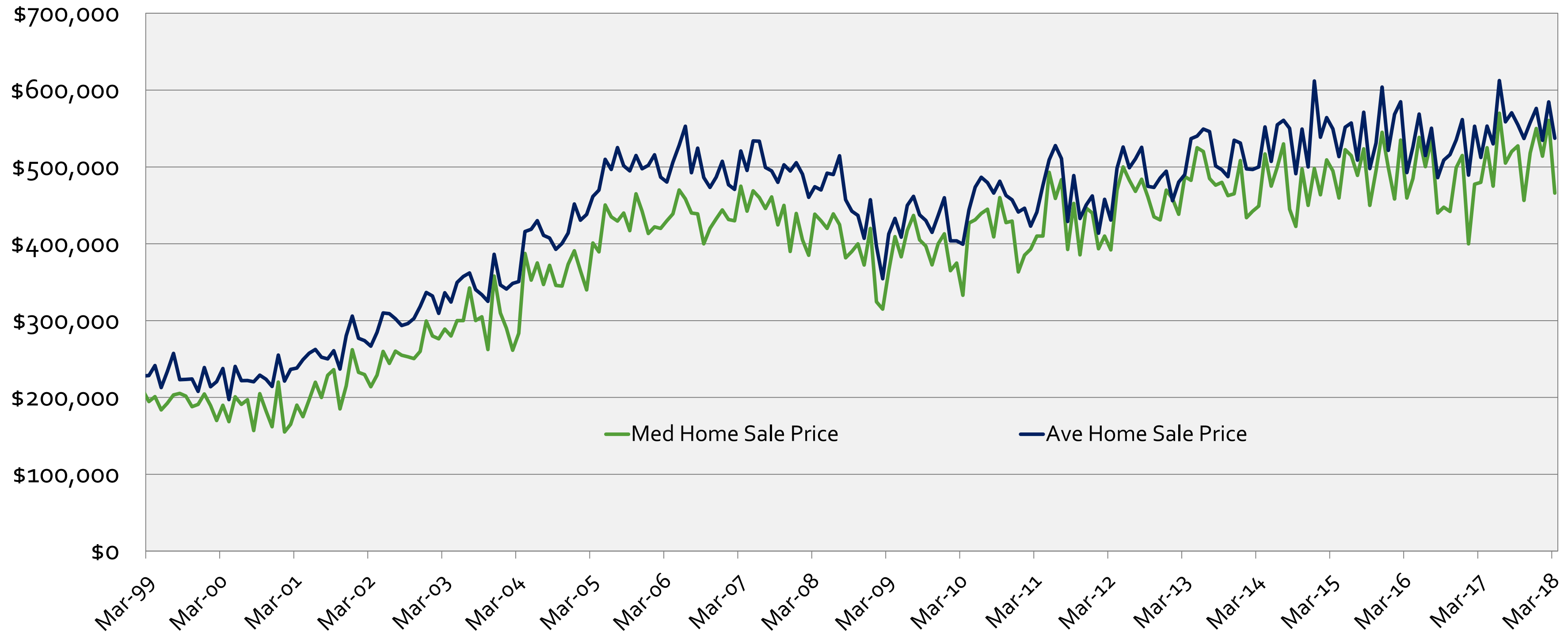
Home Sale Price Fairfax County



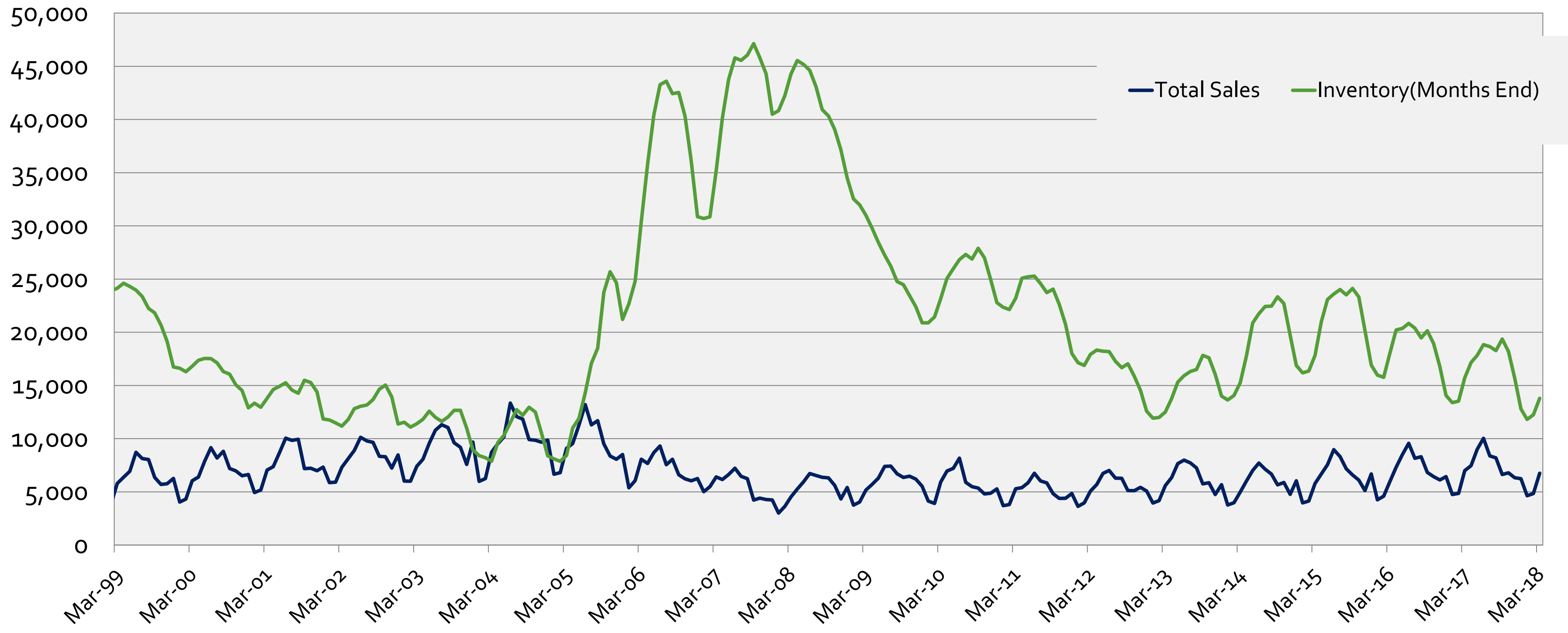
Home Sale Price Arlington



Home Sale Price Alexandria

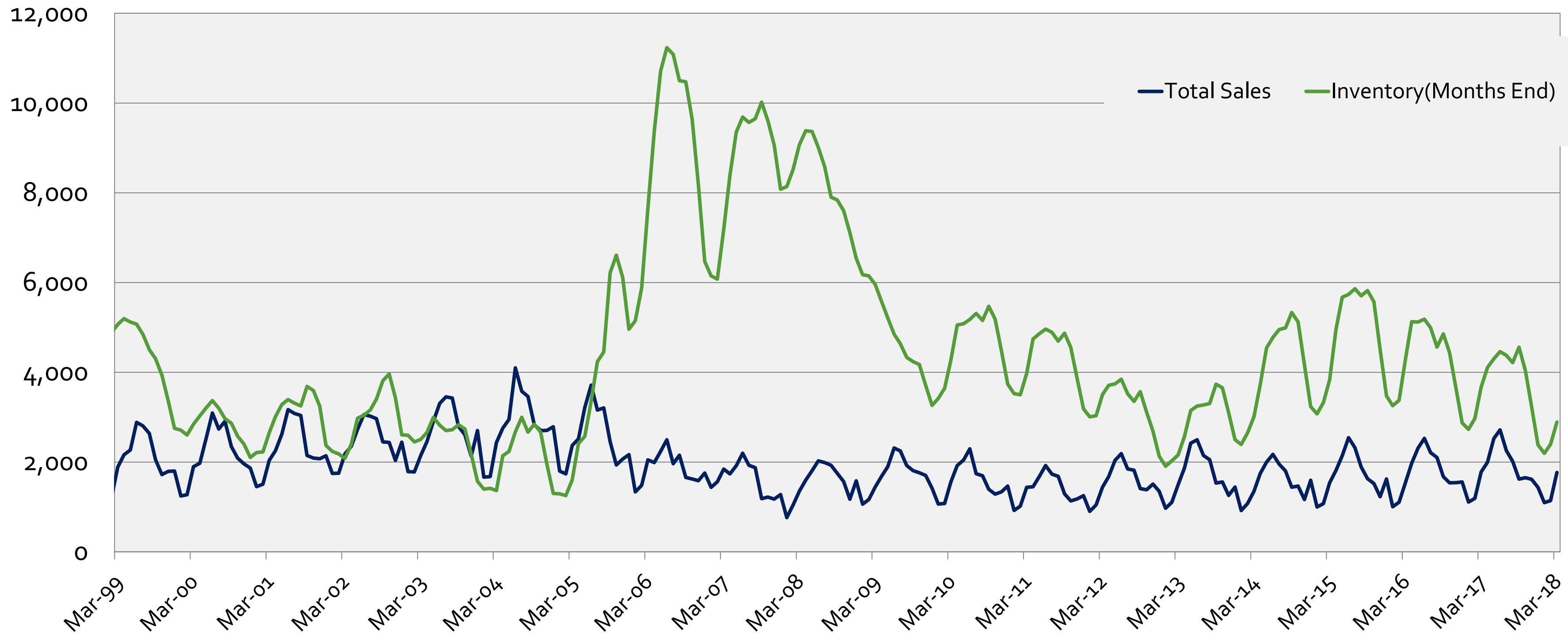


Closed Sales and Inventory Washington MSA

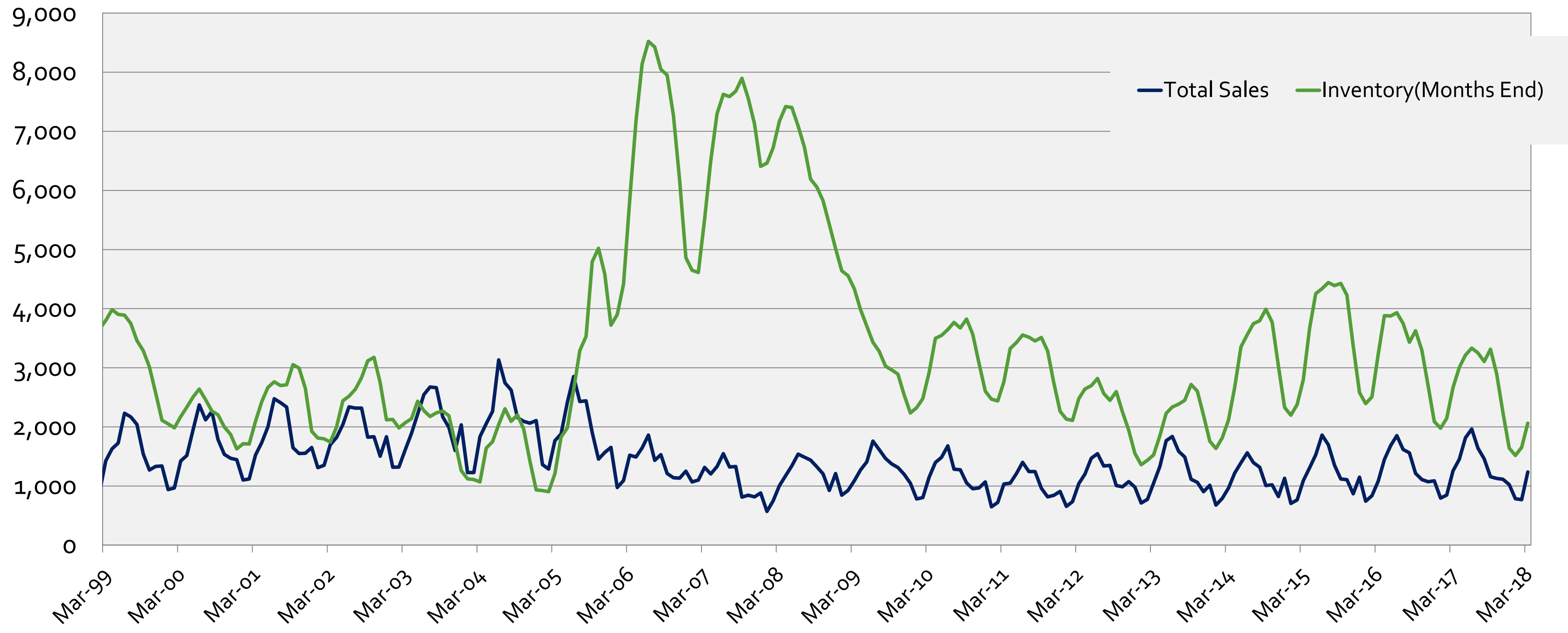


Closed Sales and Inventory

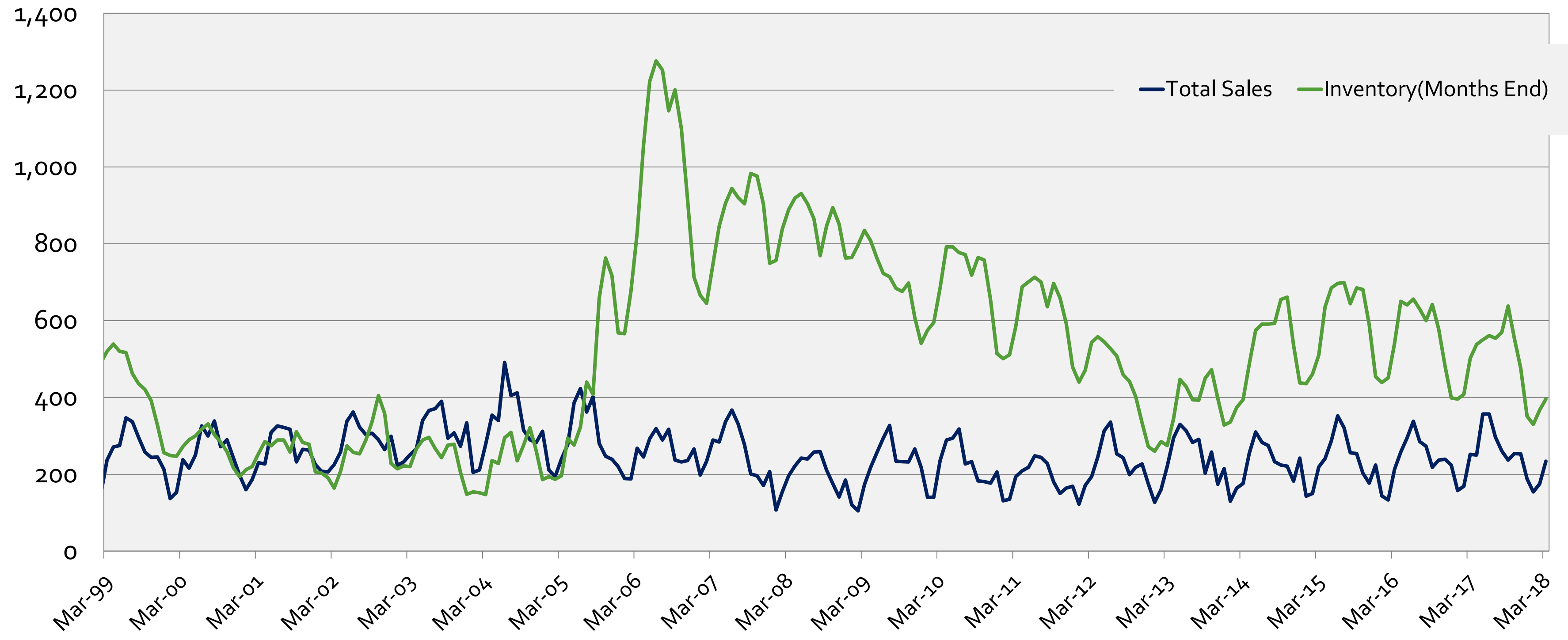
NVAR Region



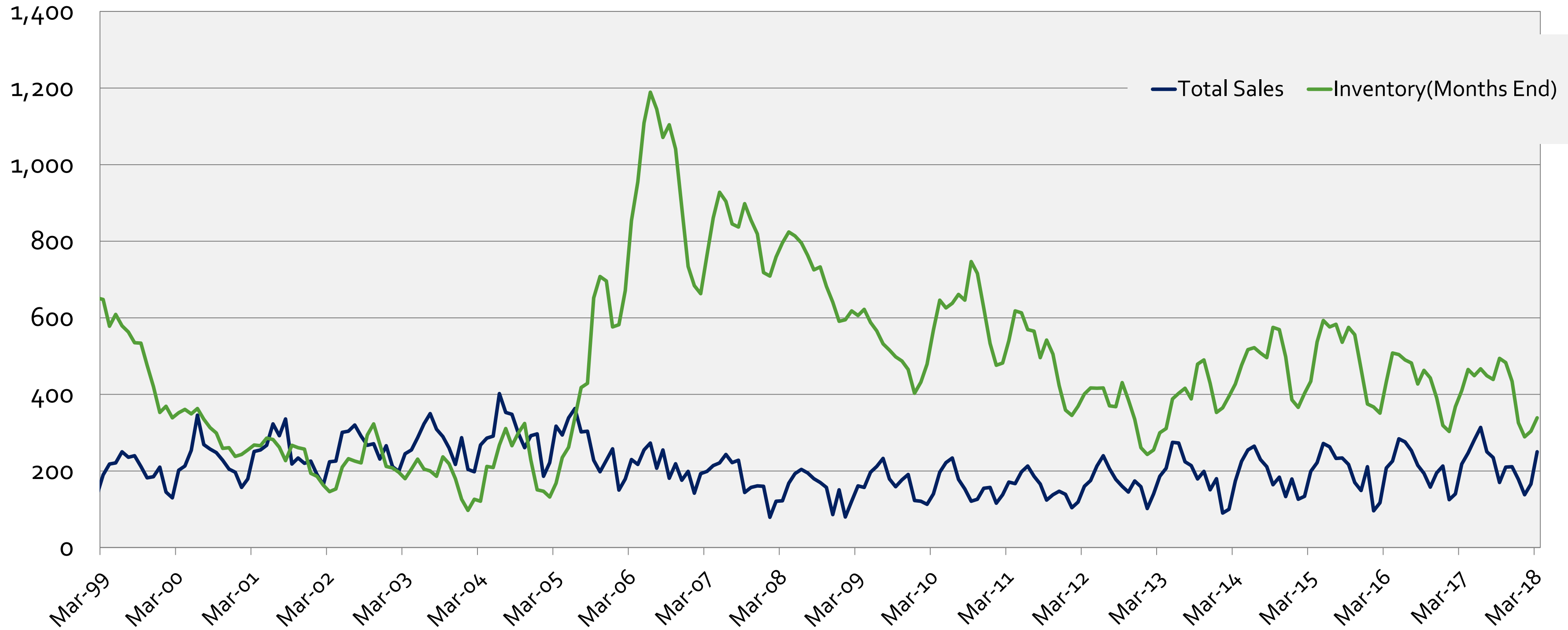
Closed Sales and Inventory Fairfax County



Closed Sales and Inventory Arlington

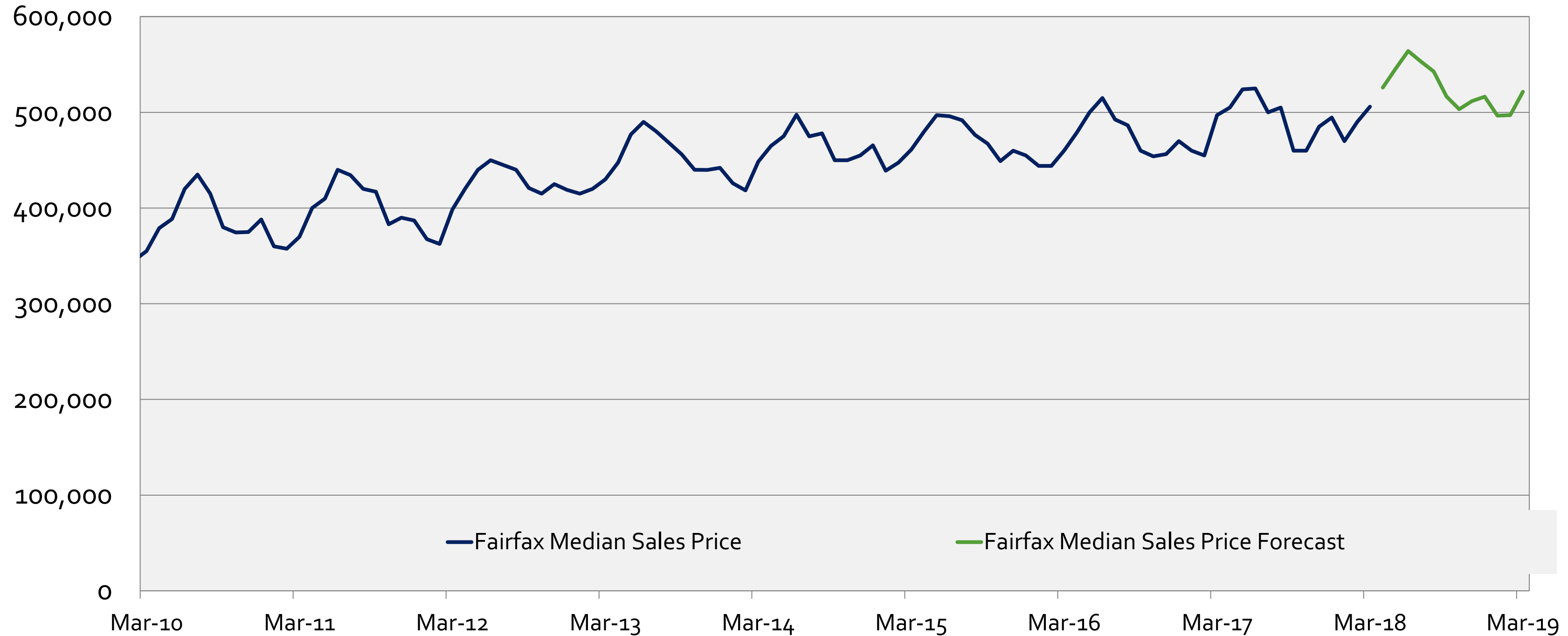


Closed Sales and Inventory Alexandria

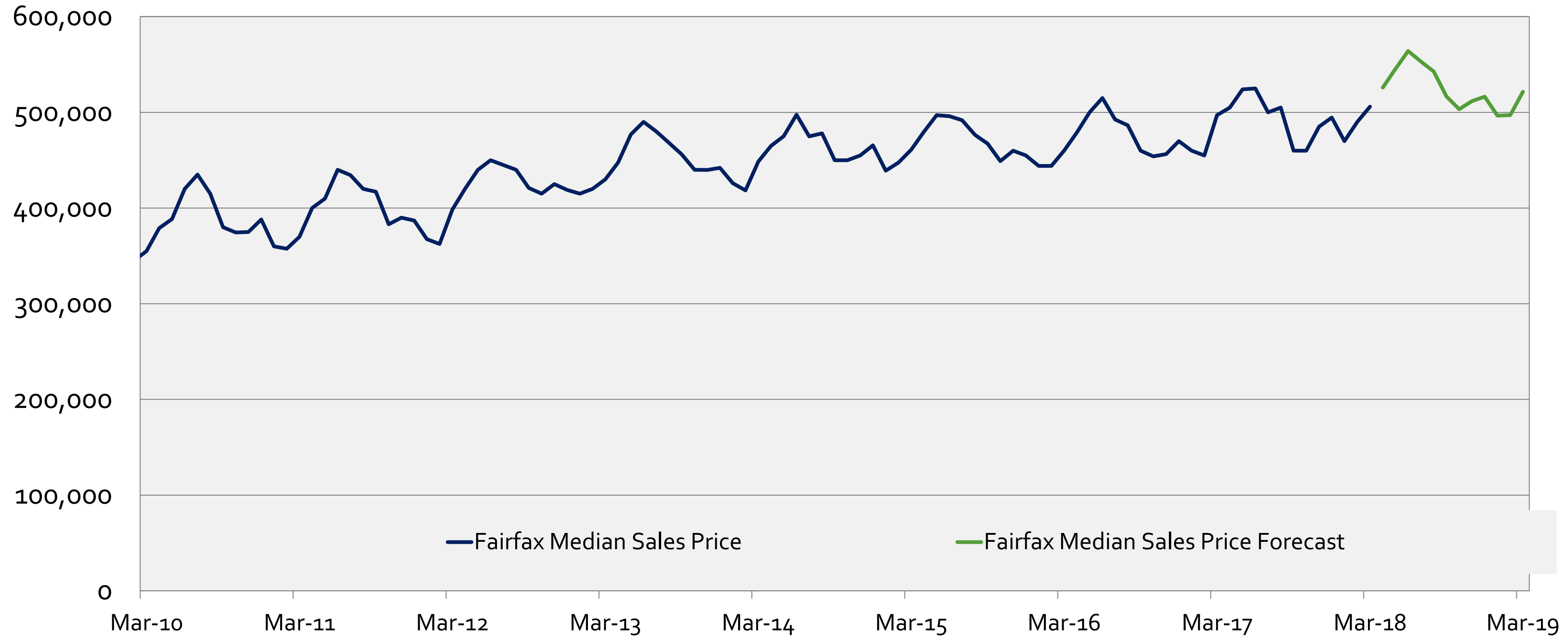


NVAR Region Forecasts

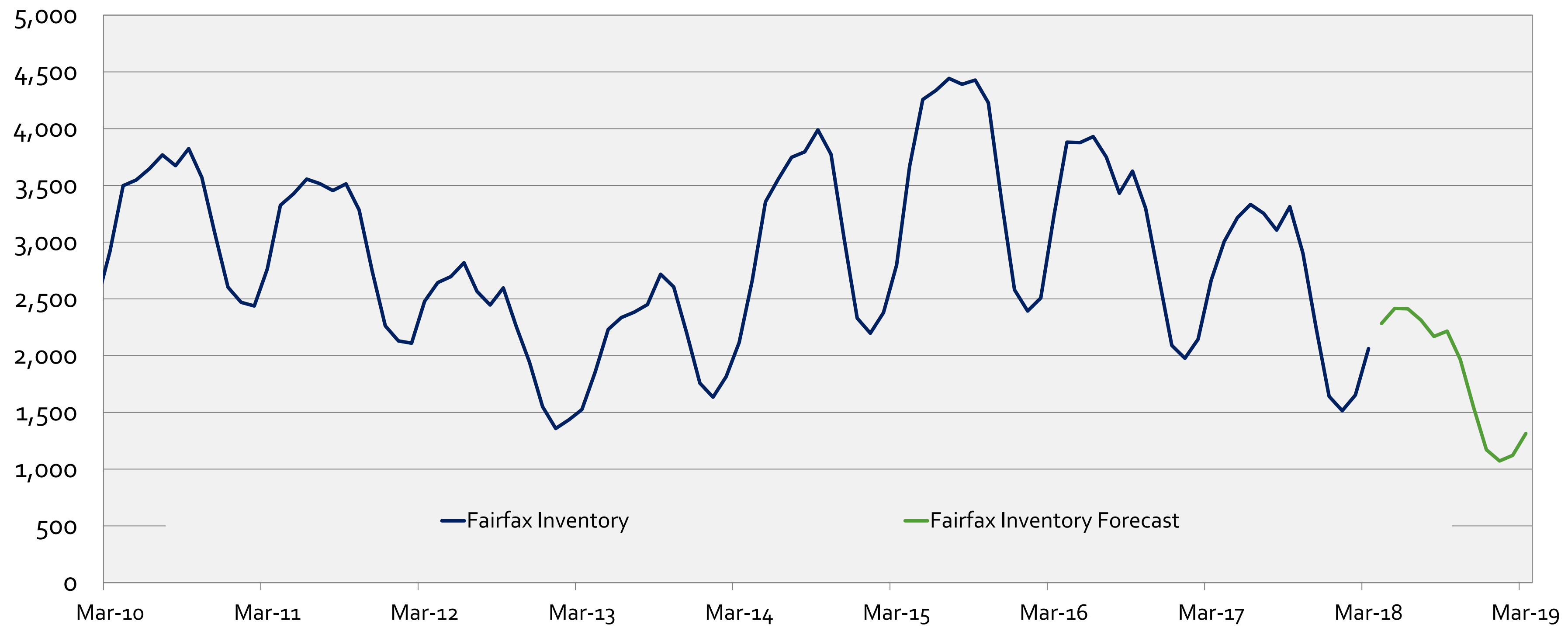
Median Sales Price Forecast Fairfax



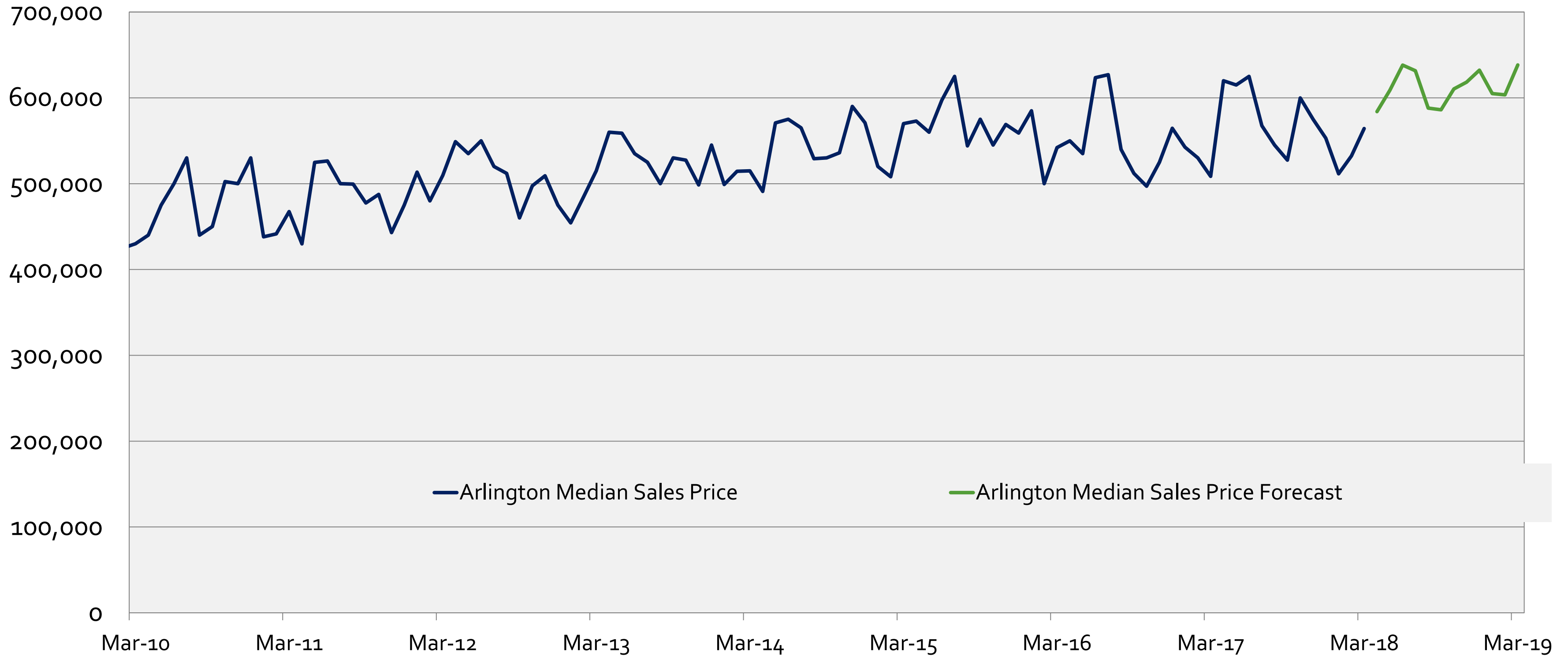
Median Sales Price Forecast Fairfax



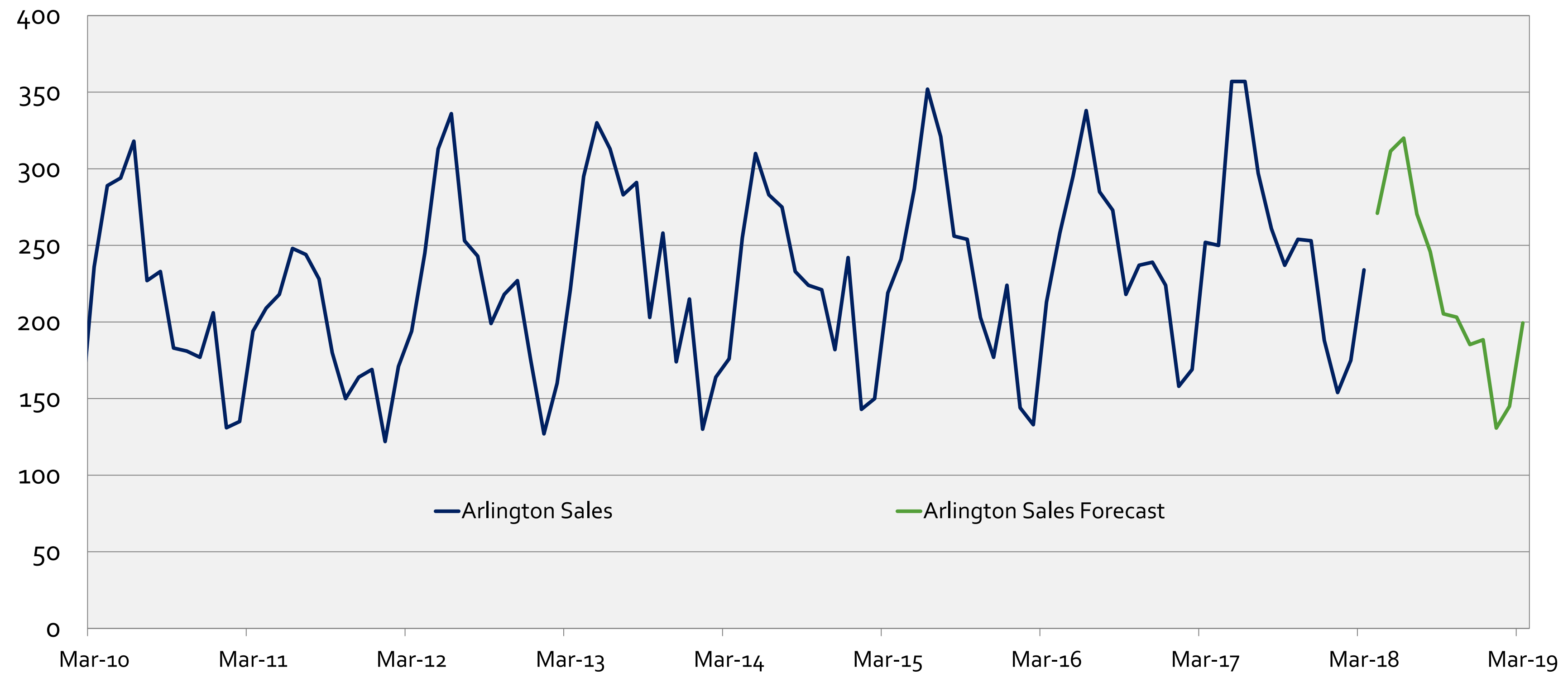
Inventory Forecast (months end) Fairfax



Median Sales Price Forecast Arlington

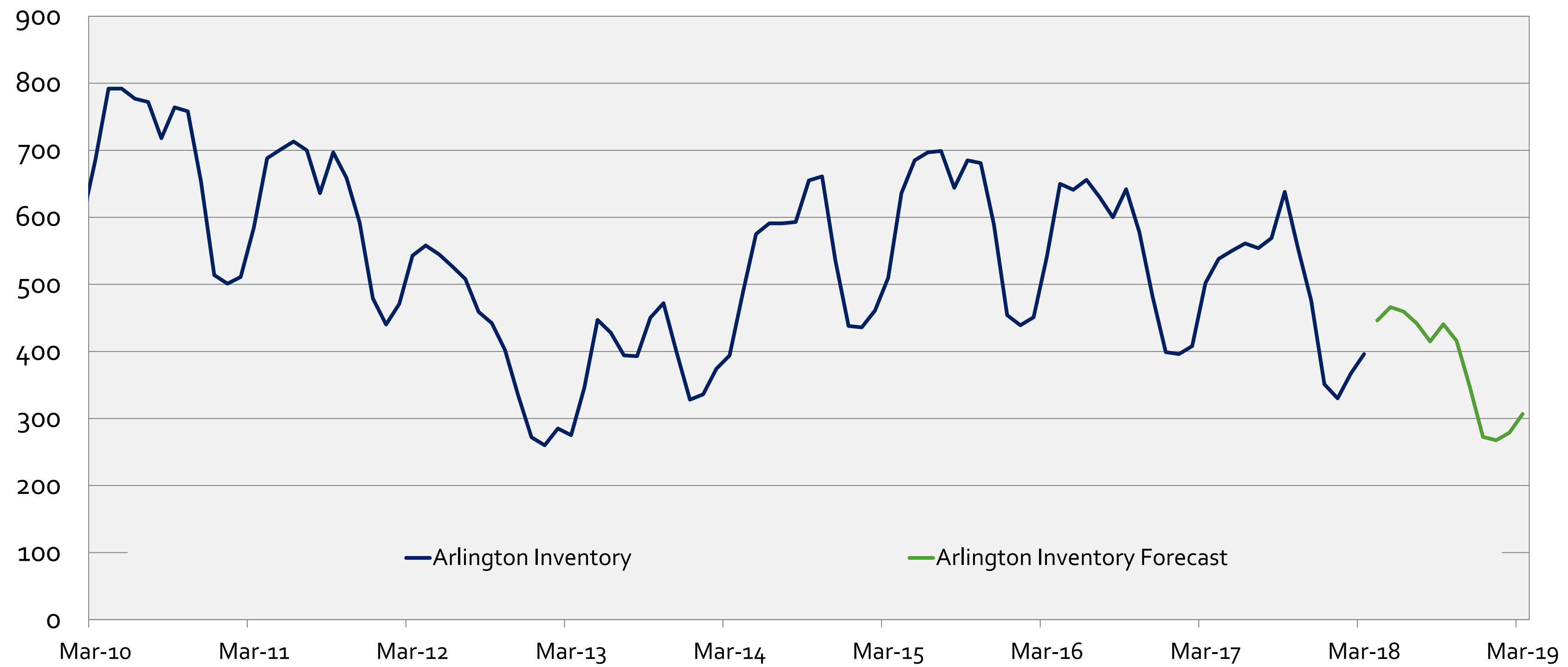


Sales Forecast (units) Arlington

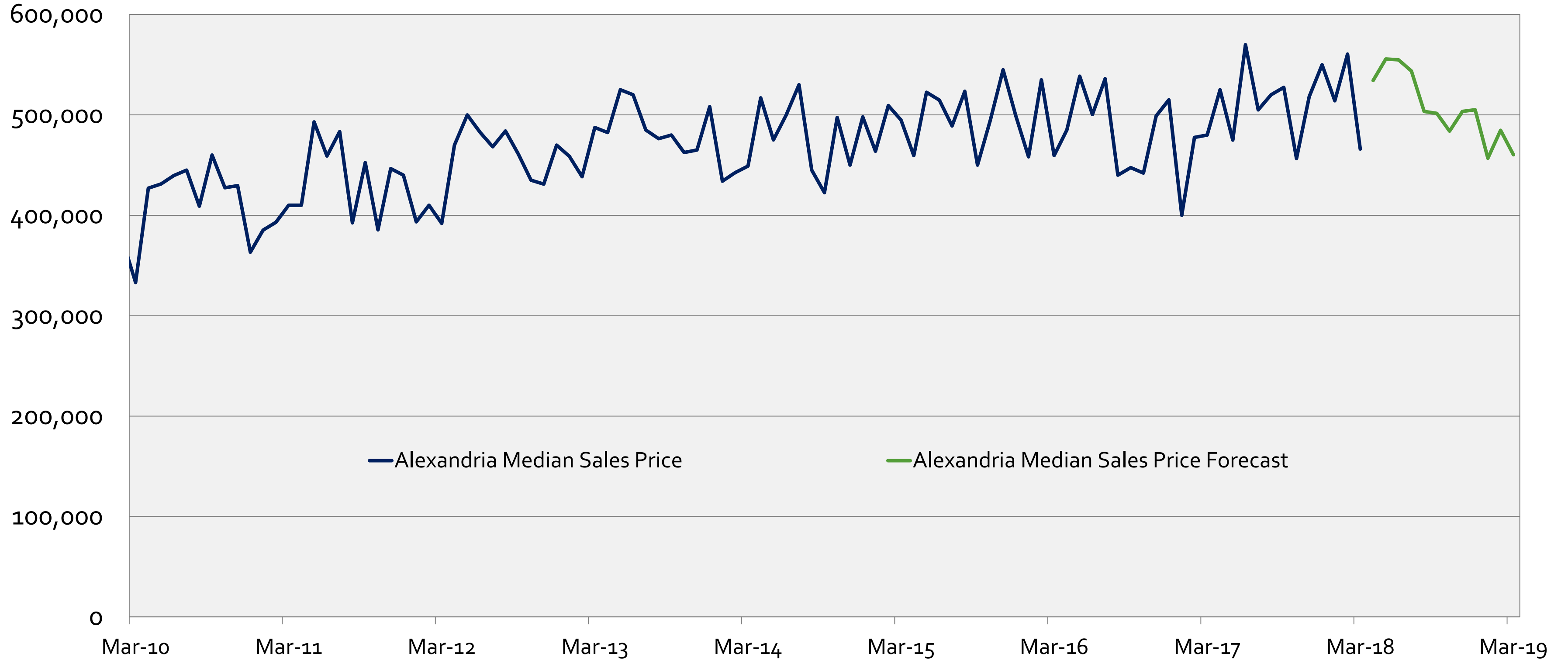


Inventory Forecast (months end)

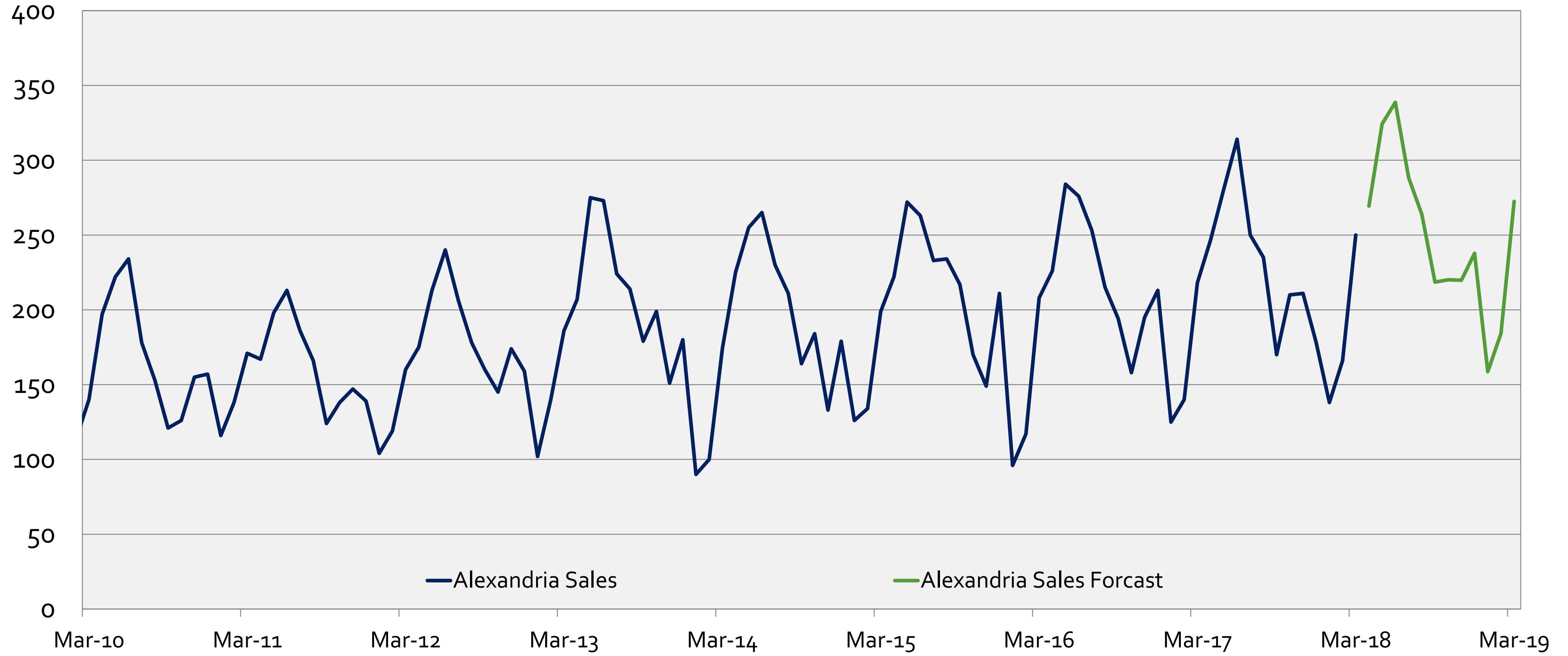
Arlington



Median Sales Price Forecast Alexandria

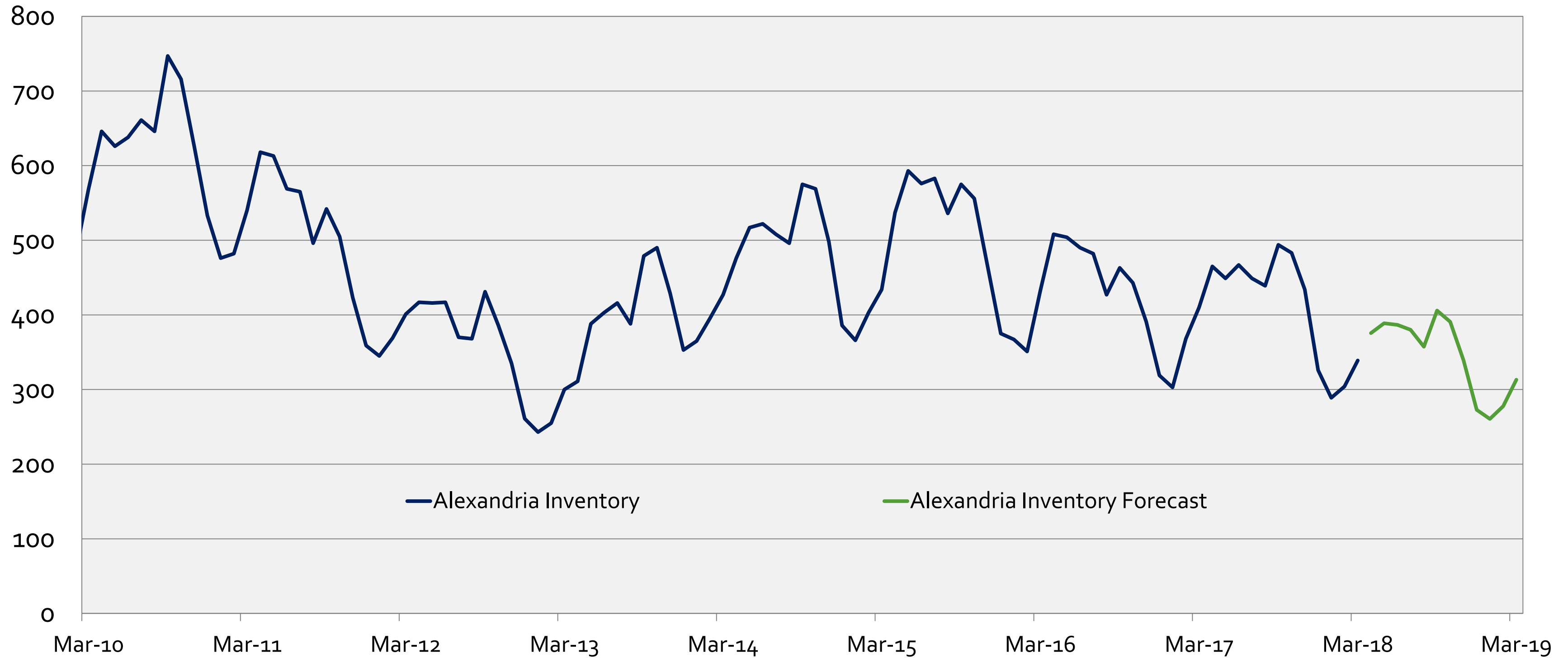


Sales Forecast (units) Alexandria



Inventory Forecast (months end)

Alexandria



Key Factors

- **Now/This Year:**

- On a roll
- Apple/Amazon
- Federal Budget (let the good times roll)
- Bonus checks
- Job growth constrained by labor availability
- Building permits not booming

- **Looking Forward**

- Economic Development = Talent Attraction
- Quality of Life is key
- Net effects of new tax laws on worker take home
- Effects of SALT limitations on local governments
- Increasing debate about 1099 work versus employment
- The sharing economy
- Construction costs
- AI

Thank You

cra.gmu.edu

NVAR Finance Summit

Susan F. Dewey
VHDA Executive Director

Who is VHDA?

Since its creation in 1972 by the Virginia General Assembly, VHDA has helped Virginians attain quality, affordable housing through public-private partnerships with local governments, community service organizations, lenders, developers, Realtors and others.



Attracting and retaining millennial households is critical to the vitality of NOVA's economy and home purchase market

Millennial first-time home buyers face numerous challenges

VHDA is addressing the challenges
of first-time home buying in
Northern Virginia head-on.

VHDA Marketing Campaign

- Marketing and Outreach campaign launched April 9th
- Combination of digital and cable television advertising
- Highlights VHDA's Loan Combo
- vhda.com/loancombo





VHDA Homebuyer Loan Programs





VHDA's Down Payment Assistance (DPA) Grant Program

- No repayment required
- 1% required investment from borrower (may be a gift)
- Grant amount 2% for VHDA Fannie Mae loans
- Grant amount 2.5% for VHDA FHA loans
- Lower income limits apply

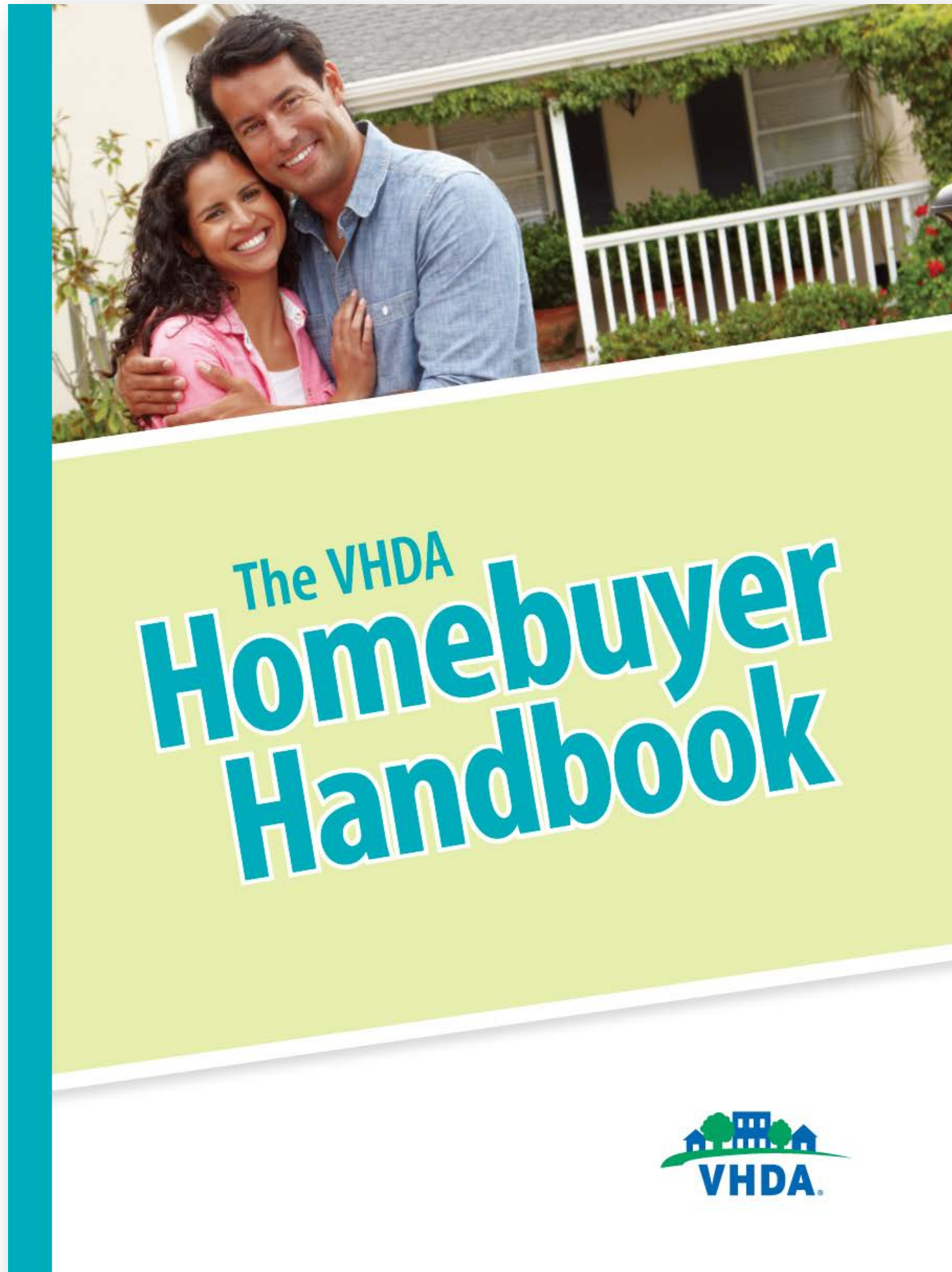
VHDA Mortgage Credit Certificates (MCCs)

NEW



**Boost the tax benefits
of owning a home.**

vhda.com/MCC



VHDA's Homeownership Education Program

Home Purchase Lending in NOVA

- In 2017, VHDA's home purchase lending doubled in NVAR's service area.
- Over the past five years, VHDA has provided \$465 million in loans serving nearly 1,700 1st-time home buyers in Arlington, Alexandria and Fairfax.

Working with Realtor Partners

- VHDA Train-the-Trainer Program
- Real Estate Agent Connection
- Listing of VHDA REOs
- Advisory Board members

VHDA is also addressing the affordability challenges of renters in Northern Virginia.

Rental Production in NOVA

- Over the past five years, VHDA has provided \$672 million in rental financing assistance in Arlington, Alexandria and Fairfax.
- This funding has supported the development of 50 affordable rental properties serving over 5,000 renters.



2015 ECONOMIC IMPACT OF THE VIRGINIA HOUSING INDUSTRY

\$47.8 Billion Economic Activity



\$23.3 Billion Value Added to Gross State Product



314,299 Jobs



\$1.66 Billion State and Local Taxes



\$14.2 Billion Labor Income

6th
**LARGEST PRIVATE
SECTOR INDUSTRY**
by Direct Output

This research was commissioned by the Governor's Housing Policy Advisory Council, whose members provided invaluable guidance and information to the research project. The full report and companion research projects for Assessing the Importance of Housing for Virginia's Economy can be accessed at www.virginiahousingpolicy.com.

The Impact of Housing for Virginia's Economy

1

Virginia has a shortage of housing affordable to a substantial share of households.



2

Failure to address affordable housing needs adequately has significantly affected key priorities of state policy.



3

Virginia needs to produce substantial new affordable housing to accommodate anticipated workforce growth.



4

The homebuilding industry faces major challenges in meeting affordable housing needs.



5

Regions with lower combined housing and transportation costs have experienced better economic performance.



6

Virginia can no longer rely on the federal government to address critical housing needs.





Trusted Identity Services Enabling the Future of Commerce

Matthew Thompson, Director of Identity Services



Background

Identity: What it is and why it matters

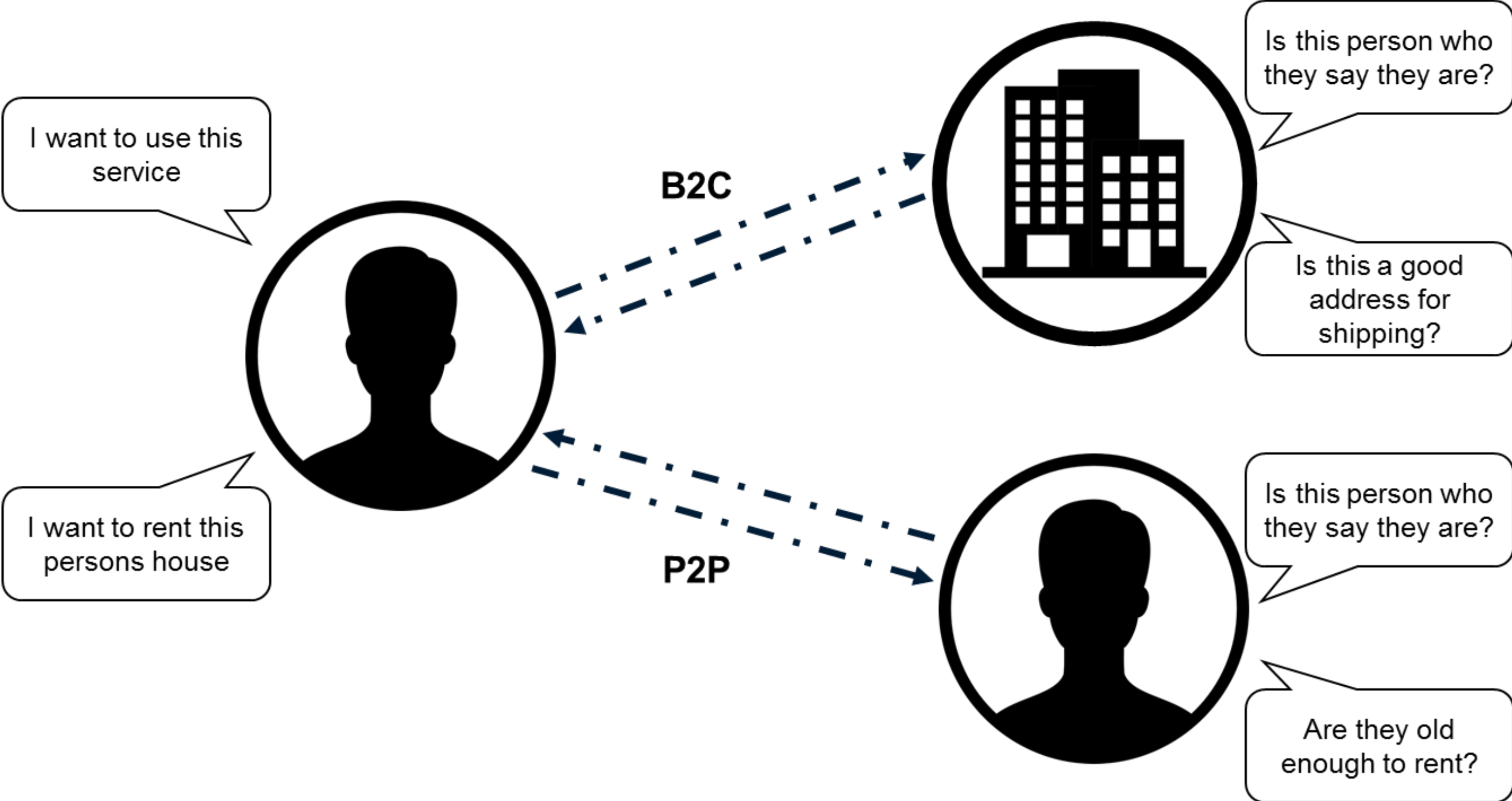
The Future of Payments

Background

Identity: What it is and why it matters

The Future of Payments

Trust in identity is a critical part of modern society



Trust between parties is critical to enabling commerce

An effective Identity Process is an integral part of how commerce is enabled in consumers' everyday lives

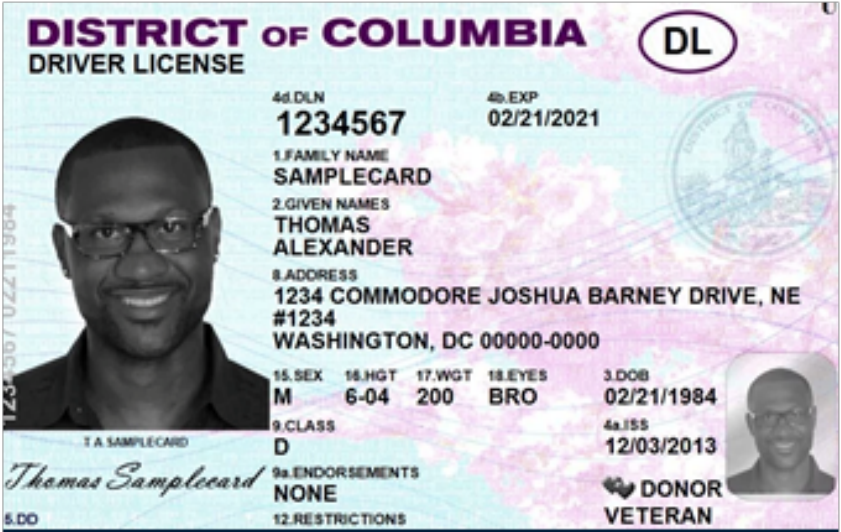
What do we mean by an effective identity process?



Represents a real person



Initially derives proof from trusted sources such as documents, data or other elements that prove the person is who they say they are



Offers a proxy of the identity so that recurring verification is simplified



Enables use by others to ascertain who the person is

Physical identity models have not evolved fast enough to effectively service the digital sector



Physical Commerce

Physical Identity was built assuming that entities would engage in face-to-face transactions

In-person transactions allow for biometric authentication of photos included on ID's



Digital Commerce

Digital Identity relies on the possession of information that is easily obtained

Does not provide for effective validation of a link between a human and the data they are presenting

Identity is the frontier of privacy and security in the digital world

	For individuals:	For legal entities:	For assets:
<p>INHERENT ATTRIBUTES Attributes that are intrinsic to an entity and are not defined by relationships to external entities.</p>	<ul style="list-style-type: none"> • Age • Height • Date of birth • Fingerprints 	<ul style="list-style-type: none"> • Industry • Business status 	<ul style="list-style-type: none"> • Nature of the asset • Asset issuer
<p>ACCUMULATED ATTRIBUTES Attributes that are gathered or developed over time. These attributes may change multiple times or evolve throughout an entity's lifespan.</p>	<ul style="list-style-type: none"> • Health records • Preferences and behaviours (e.g., telephone metadata) 	<ul style="list-style-type: none"> • Business record • Legal record 	<ul style="list-style-type: none"> • Ownership history • Transaction history
<p>ASSIGNED ATTRIBUTES Attributes that are attached to the entity, but are not related to its intrinsic nature. These attributes can change and generally are reflective of relationships that the entity holds with other bodies.</p>	<ul style="list-style-type: none"> • National identifier number • Telephone number • Email address 	<ul style="list-style-type: none"> • Identifying numbers • Legal jurisdiction • Directors 	<ul style="list-style-type: none"> • Identifying numbers • Custodianship

Trust in a person's claimed digital identity is vital to most of their interactions with an enterprise and its partners in a digital ecosystem, its systems, and with other people and things

The Identity Business is a Dog

For 20 years, nothing changed

1990s

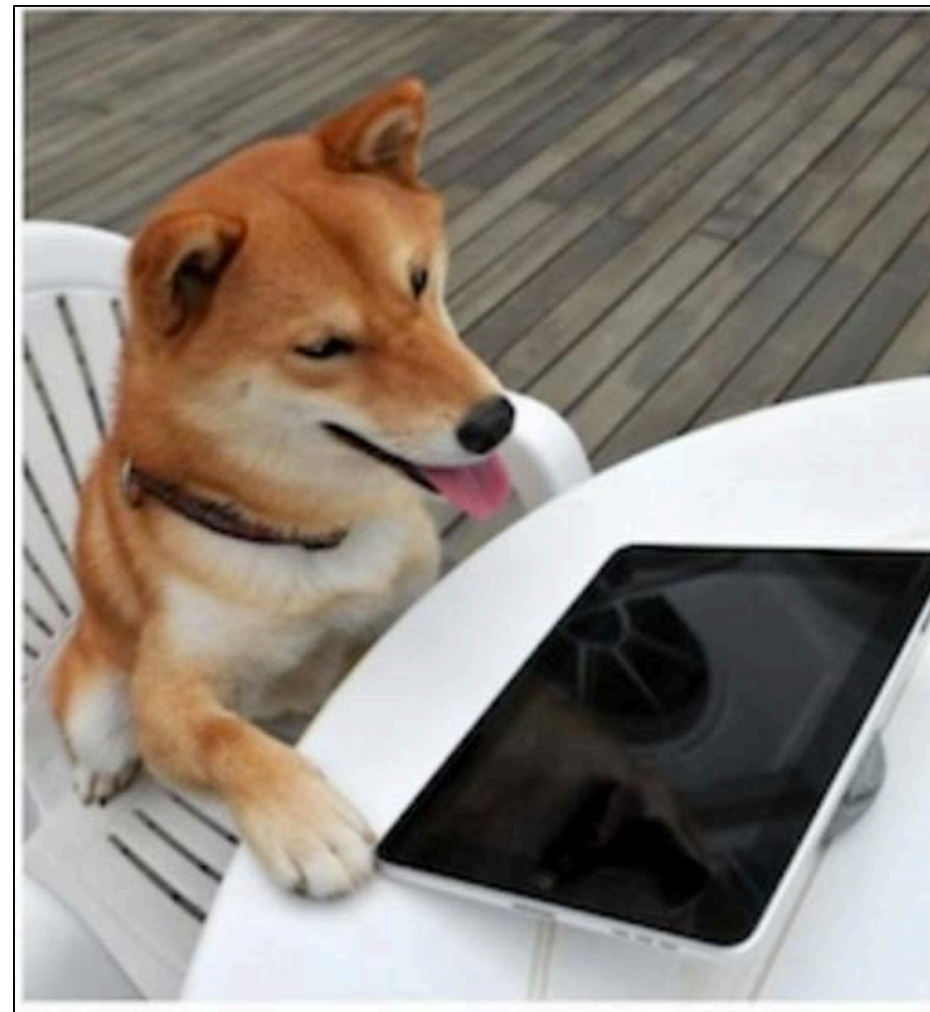
On the internet, nobody knows you're a dog



“Total anonymity”

2000s

On the internet, everybody knows you're a dog



“Cookies and tracking”

2010s

On the internet, anybody can fool us into thinking they're your dog

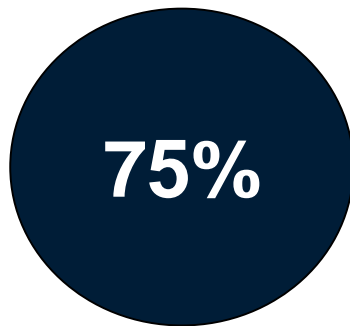


“Personal data, easily accessible”

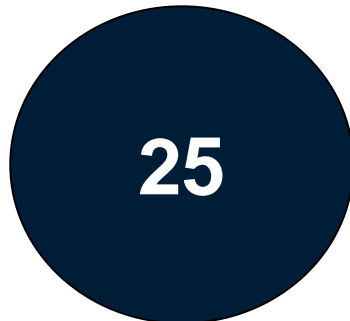
Creating several challenges for online trust

Today, consumers and businesses/governments are challenged with finding a user friendly, secure and cost effective method to access applications and conduct business online

Consumers



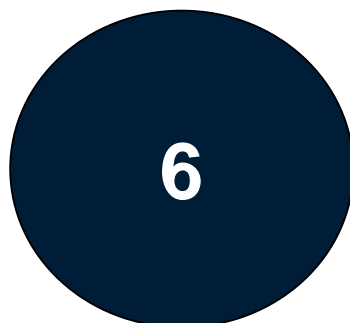
...of customers will avoid creating new accounts



...is the average number of accounts a user has that require passwords

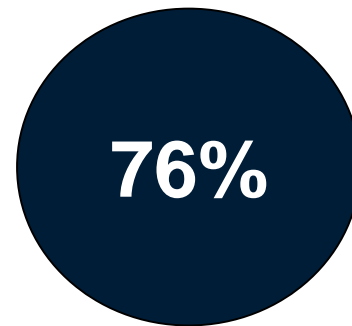


...is the average web passwords held by a user

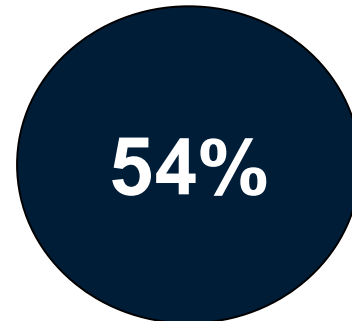


...is the average number of passwords a user enters per day

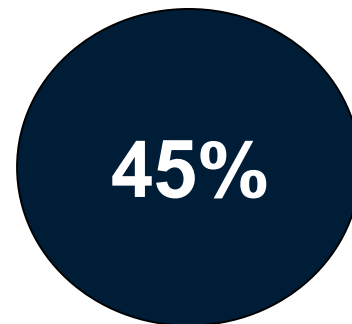
Business / Government



...of network intrusions exploited weak or stolen credentials

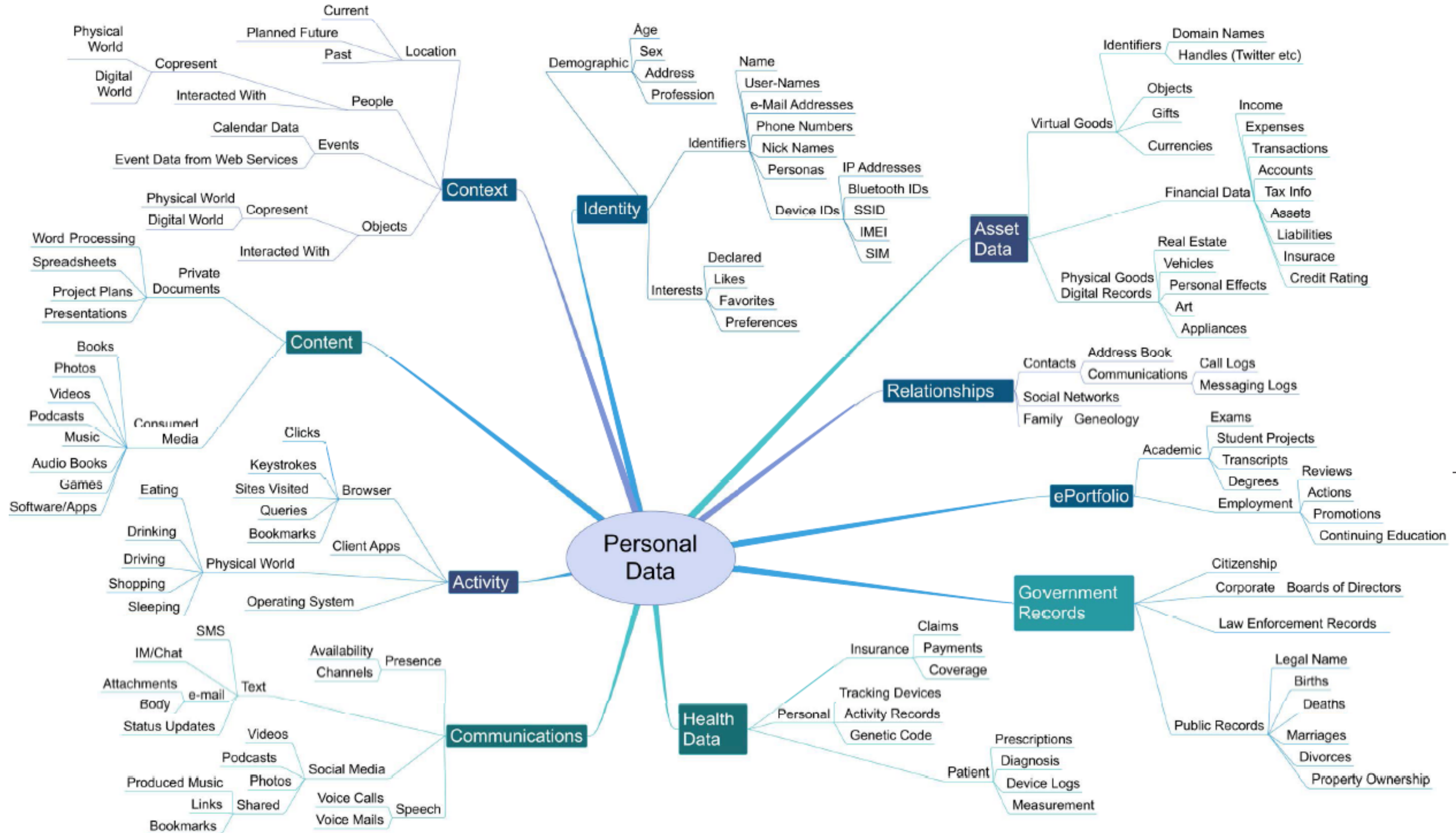


...of users leave the site or do not return when asked to create a new password



...of consumers will abandon a site rather than attempt to reset their passwords or answer security questions

Personal Data is Abundant...and Growing



PERSPECTIVES

IDENTITY is the NEW MONEY

DAVID BIRCH

A number of trends are impacting payments

WeChat + Alipay

**Mobile POS
payments**

**Technology taking
over banking**

**Real-time
payments**

Rise of ecommerce

There has been a land grab for POS NFC payments

Examples of POS NFC Payments Players

Apple Pay



SAMSUNG pay



pay



fitbit.



JAWBONE®



KERV™



Recently, the European Union has changed the regulatory landscape

Key Tenets of Payment Services Directive 2

(To be implemented by Jan 13, 2018)

Force banks to make services and customer data available to third parties

Offer licenses for third parties to formally offer banking services

Tech companies have been eyeing banking licenses for some time, including in the U.S.

Abroad



Dec 2016:

Obtained licenses for e-money and payment services in Europe (Ireland)

In the U.S.

Creation of a lobbying group



Nov 2015:

Google, Apple, Amazon, PayPal, and Intuit form the lobbying group “Financial Innovation Now”

Individual efforts



Sep 2017:

Applied for an industrial loan company charter in Utah to expand its small-business lending



Q2 2016-2017

Met with U.S. banking regulators to discuss “issues related to mobile payments and payment processing, financial innovation, and technology”

Two credible efforts pushing real-time ACH, i.e., “faster payments”, are in market

Key Real-Time Rails

The Clearing House (TCH) Real Time Payments

- New rail for bank to bank payments to enable faster clearing and settlement in an information-rich manner

Early Warning Systems (EWS) Zelle™ Network

- Uses a directory, requiring billers to know the identity of the person they want to bill
- Funds are transferred using ACH, but banks agree to make funds available in real-time

Ecommerce is expanding into more of what we buy

Key Trends Driving Ecommerce Growth

We are increasingly comfortable buying online

New categories of products are finding successful ecommerce models

Mobile is bringing ecommerce into physical store (e.g., order ahead)



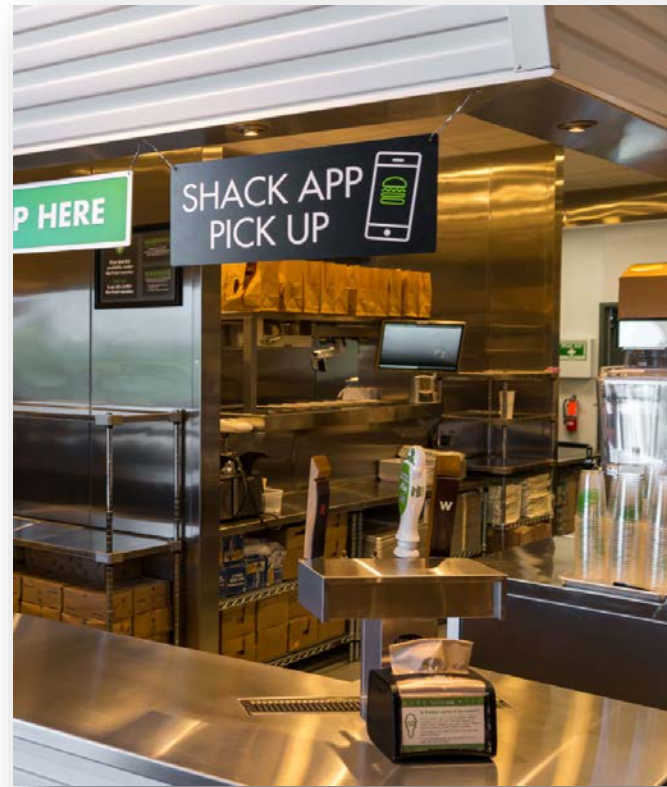
Ecommerce is cracking even unlikely industries

Example: Ecommerce's Entry Vectors into Food and Beverage Industry

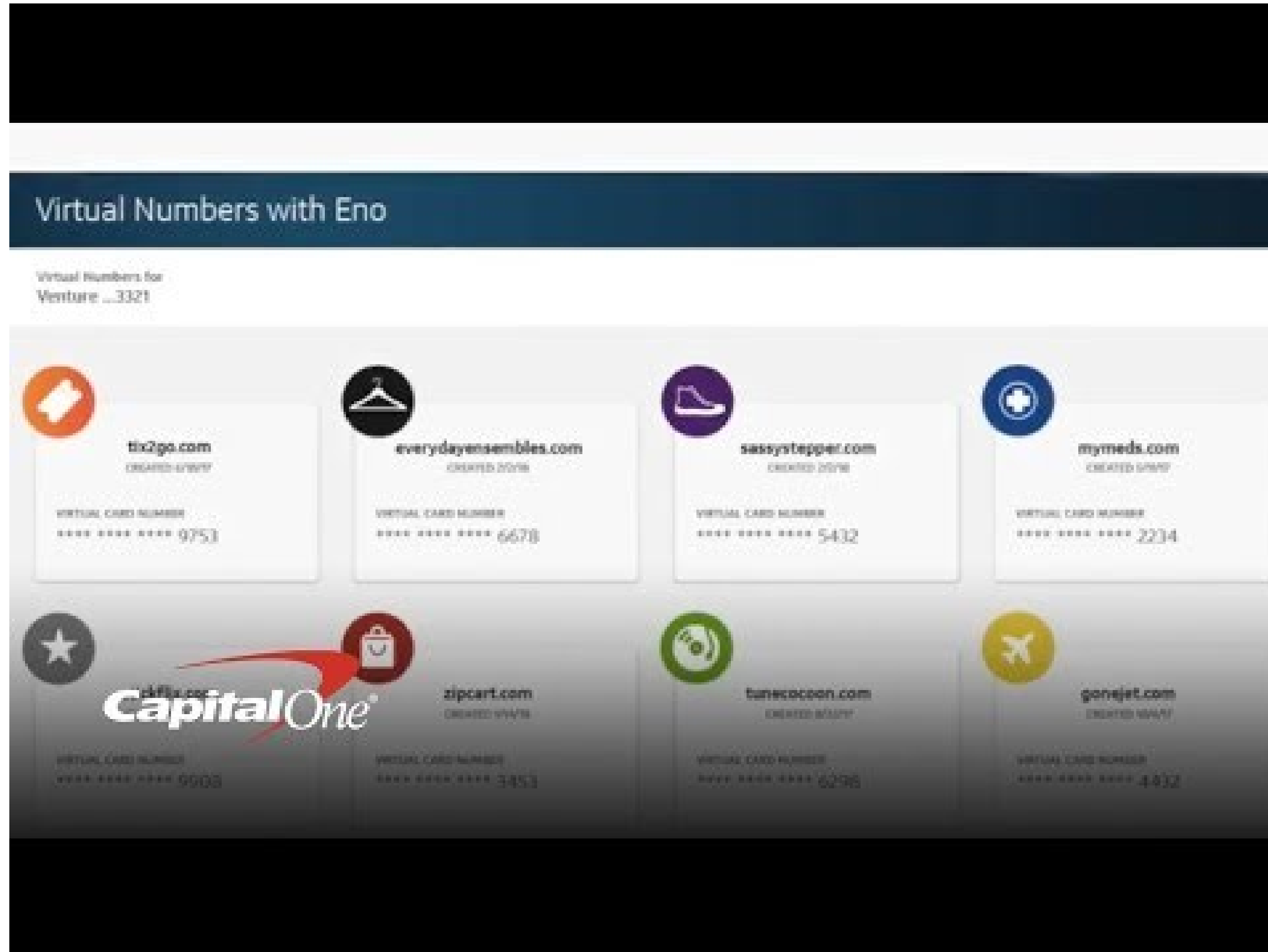
Order ahead

Delivery services

"Pay at table"



We are launching a browser companion app to make online checkout easier and safer



Capital One account features:

Account balances

Available credit

Due dates

Make payments

and more



Capital One

Eno? U up? When's my Venture Card bill due? 🤔



The payment for your Venture Card is due in 5 days.



MBA Economic and Mortgage Finance Outlook

Prepared for the NVAR Finance Summit

May 2018

Presented by
Mike Fratantoni
Mortgage Bankers Association

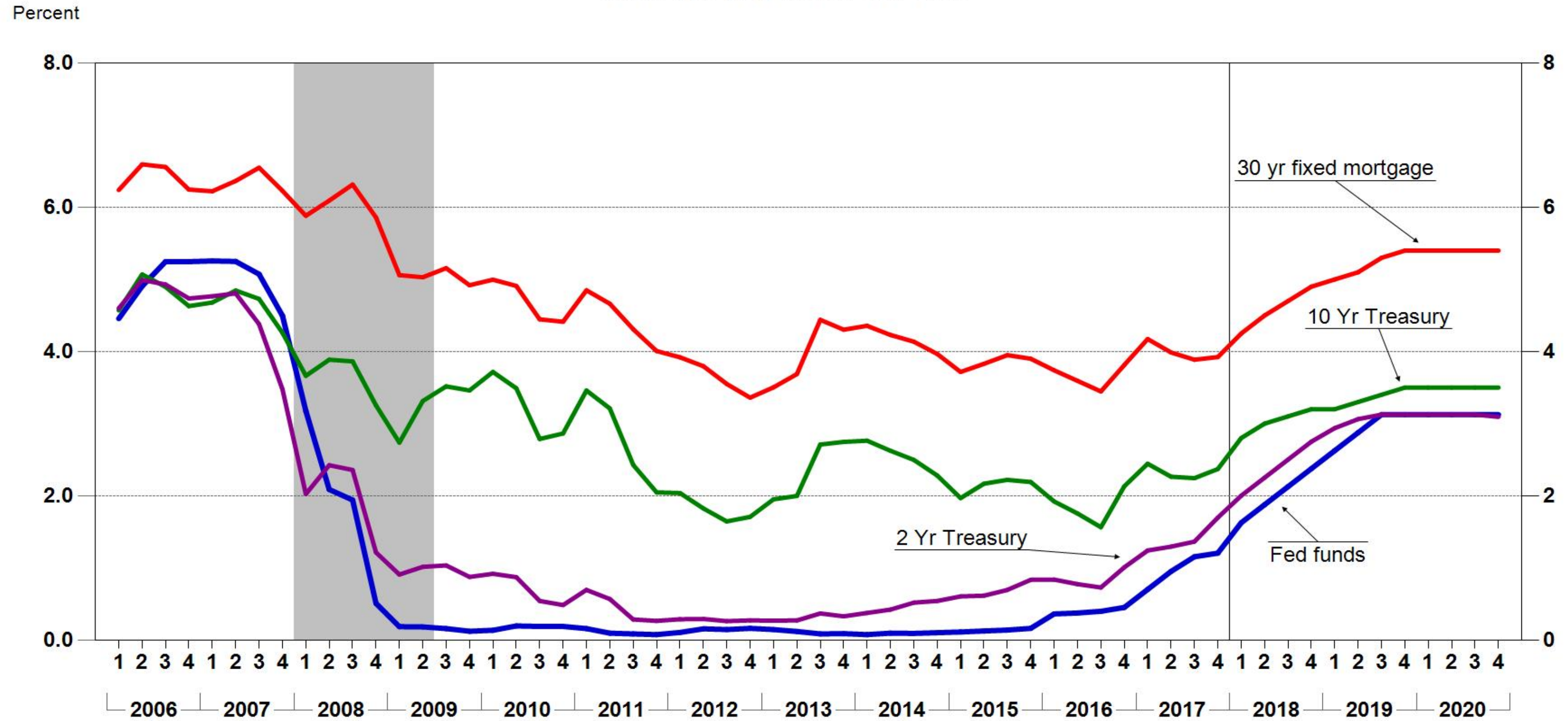
MBA[®]

MBA Forecast Summary

	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
GDP Growth	2.6%	2.6%	2.3%	1.5%
Inflation	2.1%	2.4%	2.5%	2.5%
Unemployment	4.4%	3.8%	3.7%	3.8%
Fed Funds	1.375%	2.375%	3.125%	3.125%
10-year Treasury	2.4%	3.3%	3.5%	3.5%
30-year Mortgage	3.9%	5.0%	5.4%	5.4%
New home sales (000s)	617	653	667	699
Existing home sales (000s)	5,542	5,642	5,783	5,964
Purchase originations (\$B)	1,110	1,167	1,250	1,317
Refi originations (\$ B)	600	446	395	395
Total originations (\$B)	1,710	1,613	1,645	1,712
Mortgage debt outstanding (\$B)	10,010	10,370	10,760	11,130

Rates Expected to Increase

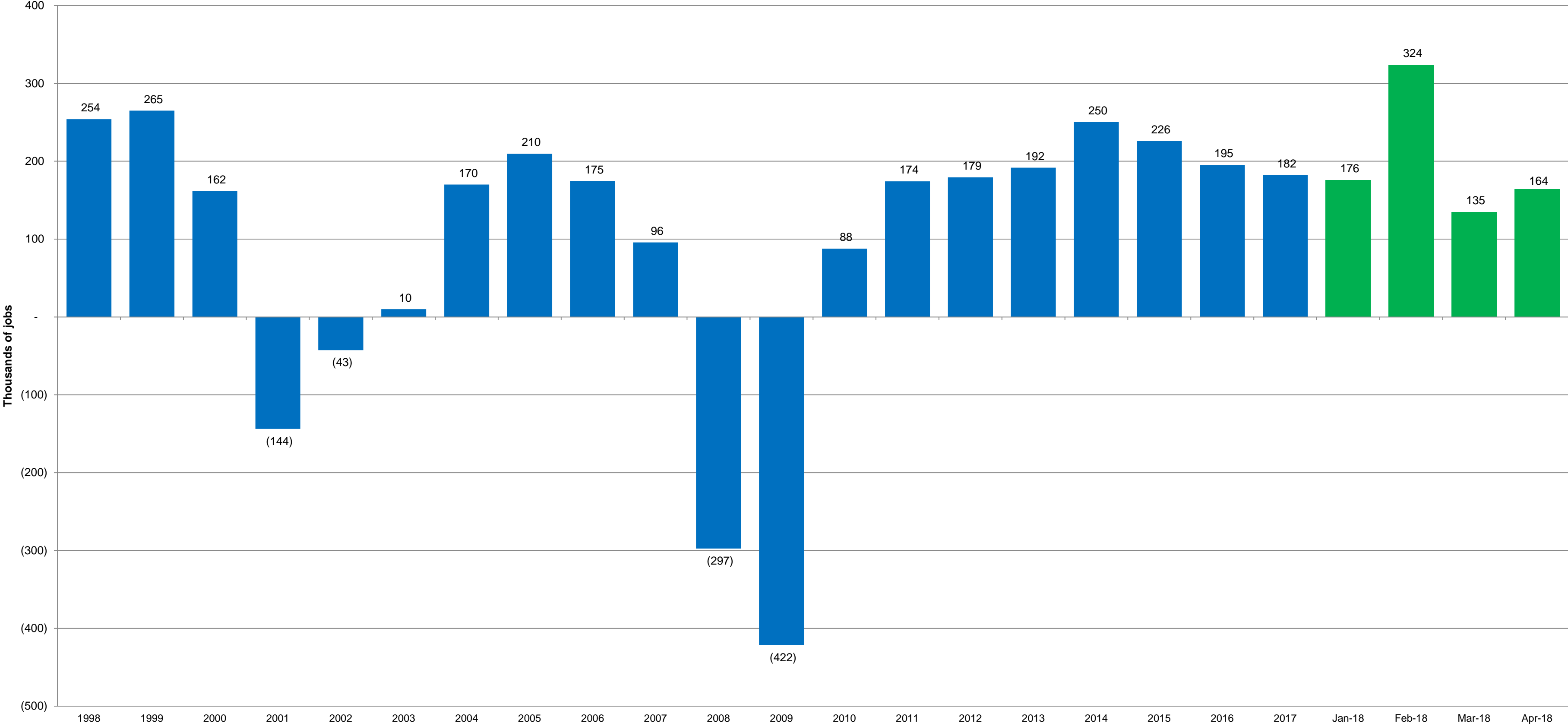
Rate History and Forecast



Source: Federal Reserve, Freddie Mac, MBA Forecast

Job Growth Unexpectedly Strong

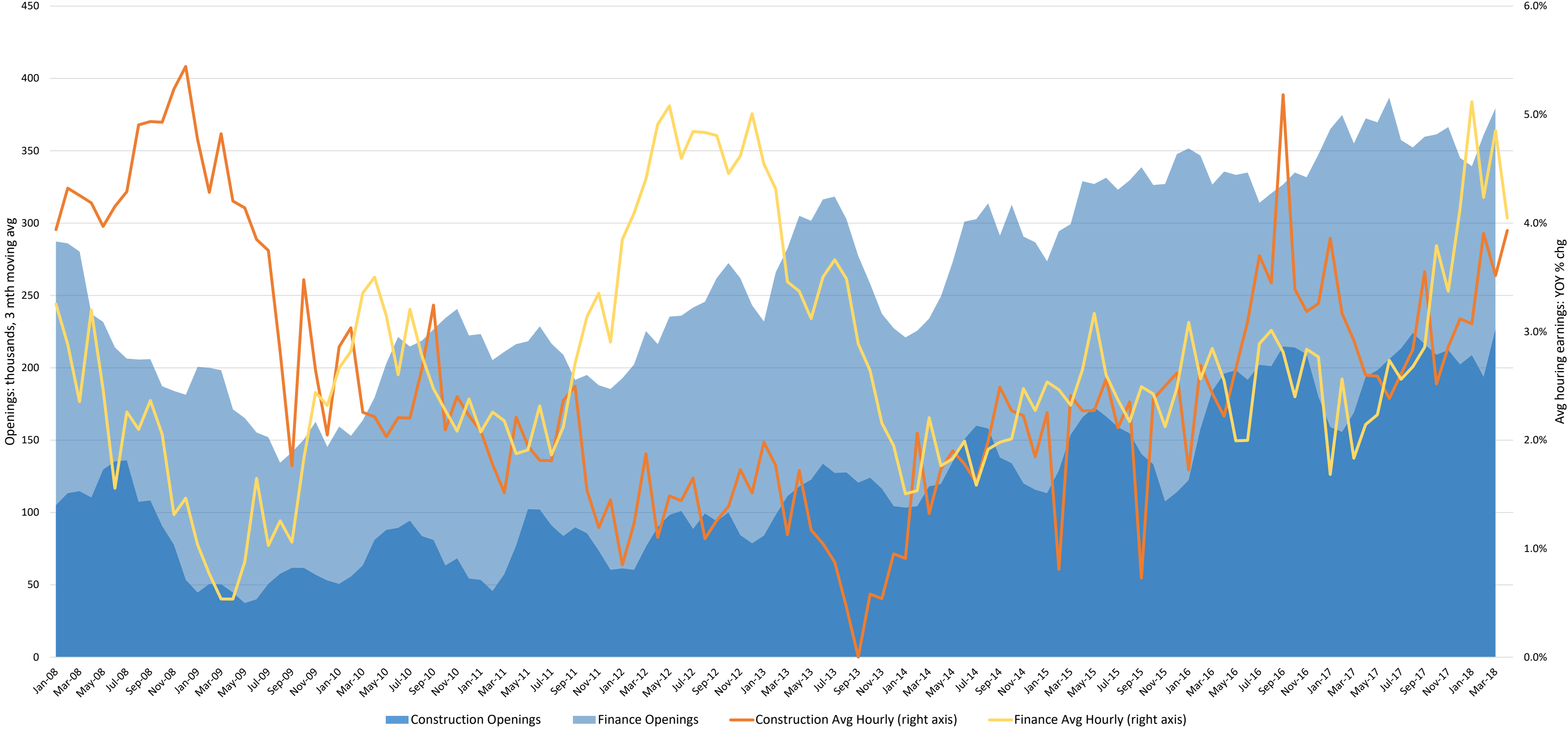
Monthly Payroll Growth



Source: BLS

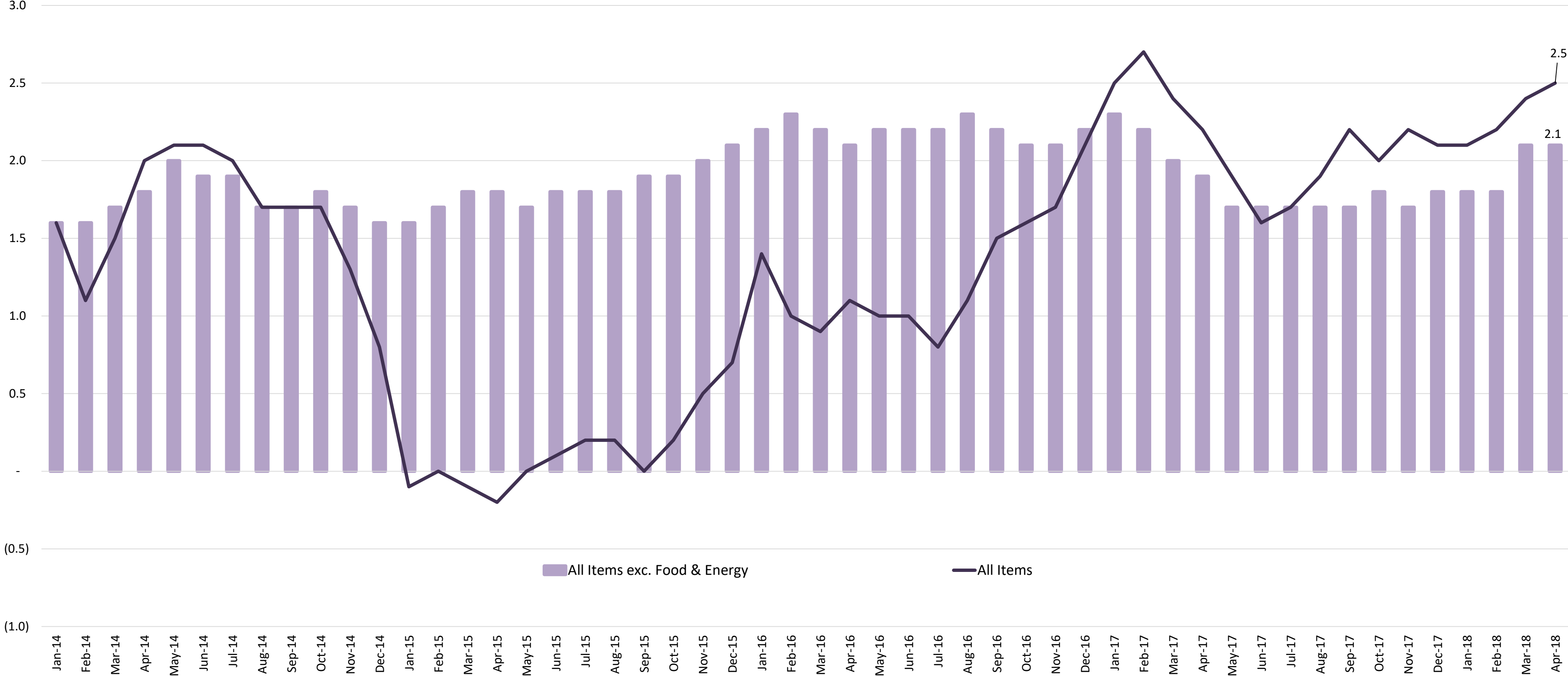
Companies Still Having Difficulties Filling Openings

Chart of the Week - May 11, 2018
 Construction & Finance Sector Job Openings and Wage Growth



Core Inflation Stepping Up

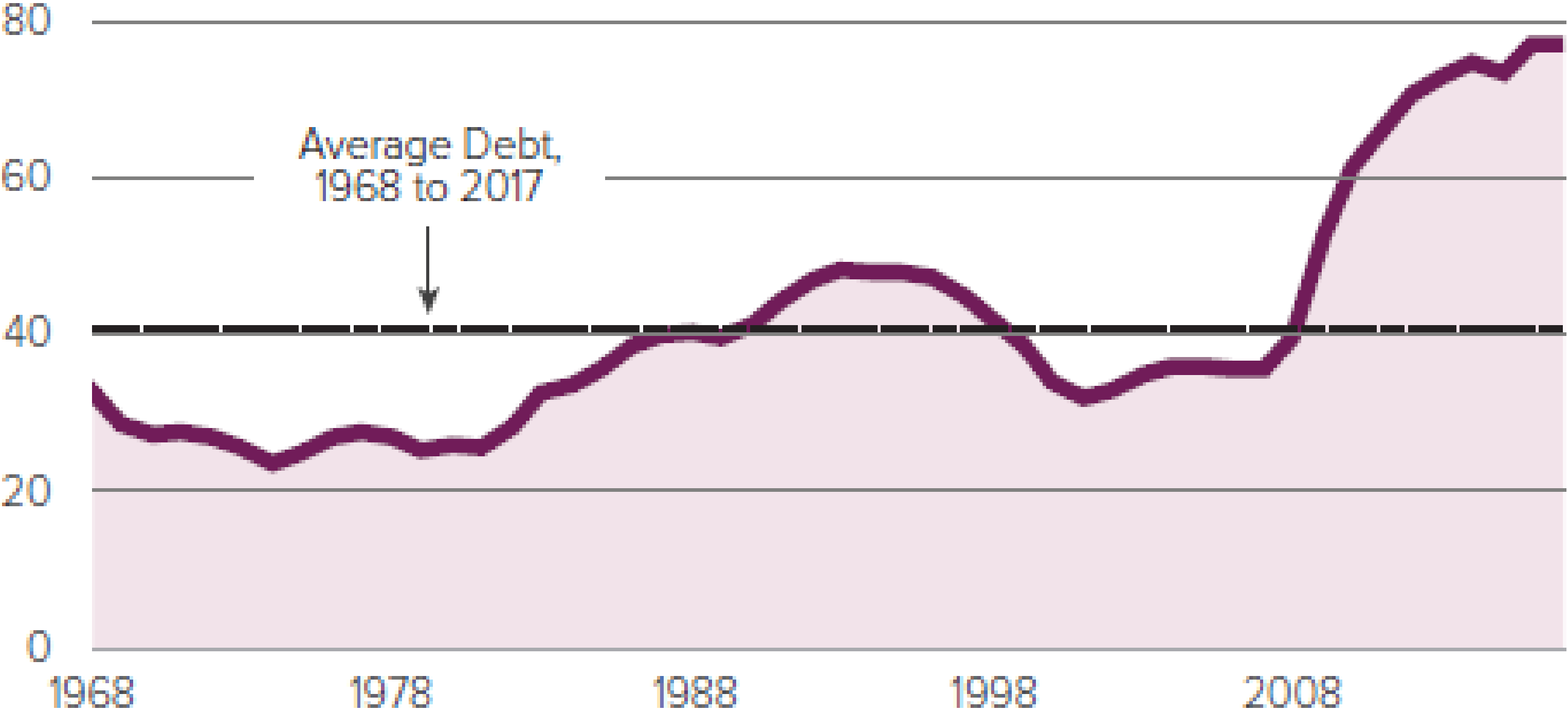
Consumer Price Index
Year over year percent change



Source: BLS

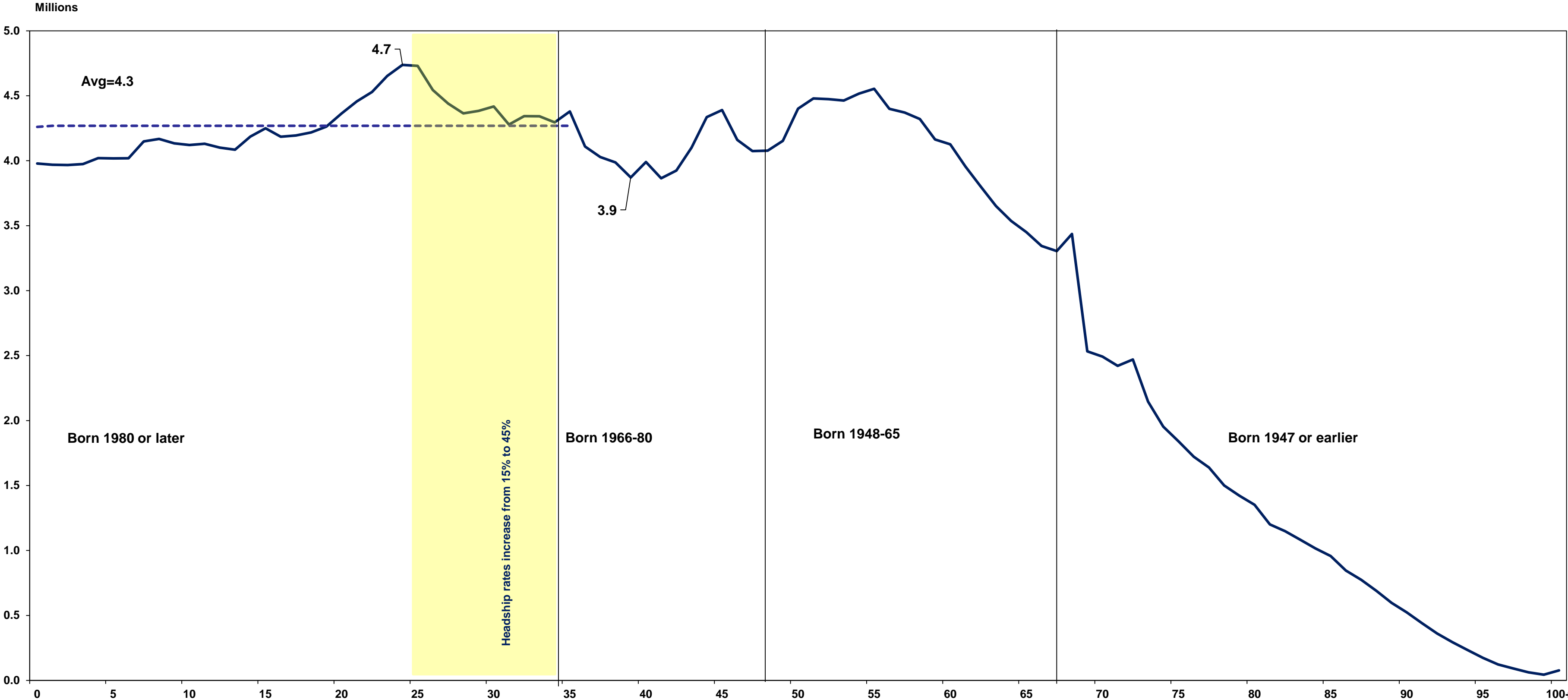
Federal Debt Held by the Public, 1968 to 2017

Percentage of Gross Domestic Product



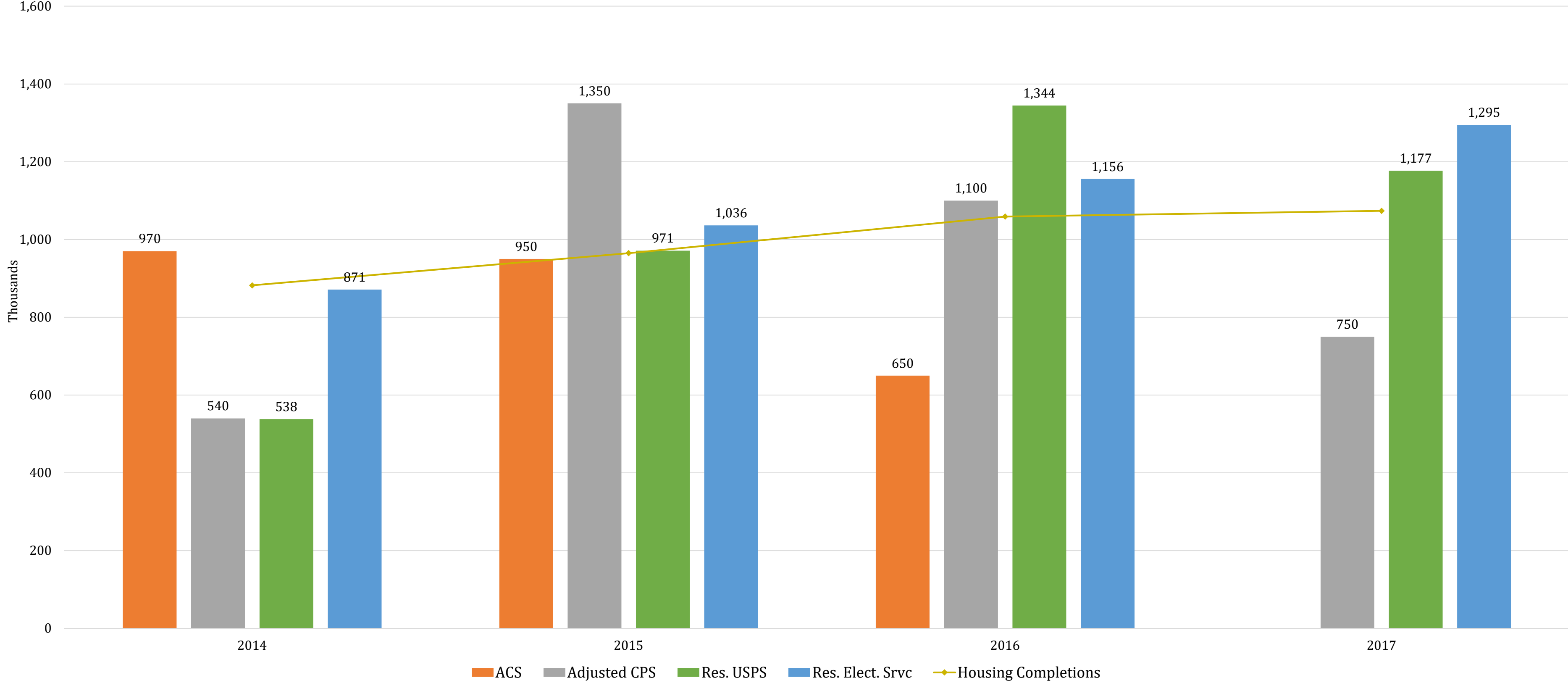
Source: Congressional Budget Office

Millennials Hitting Peak Housing Demand Years



Demand Strong but Household Formation Facing Headwinds

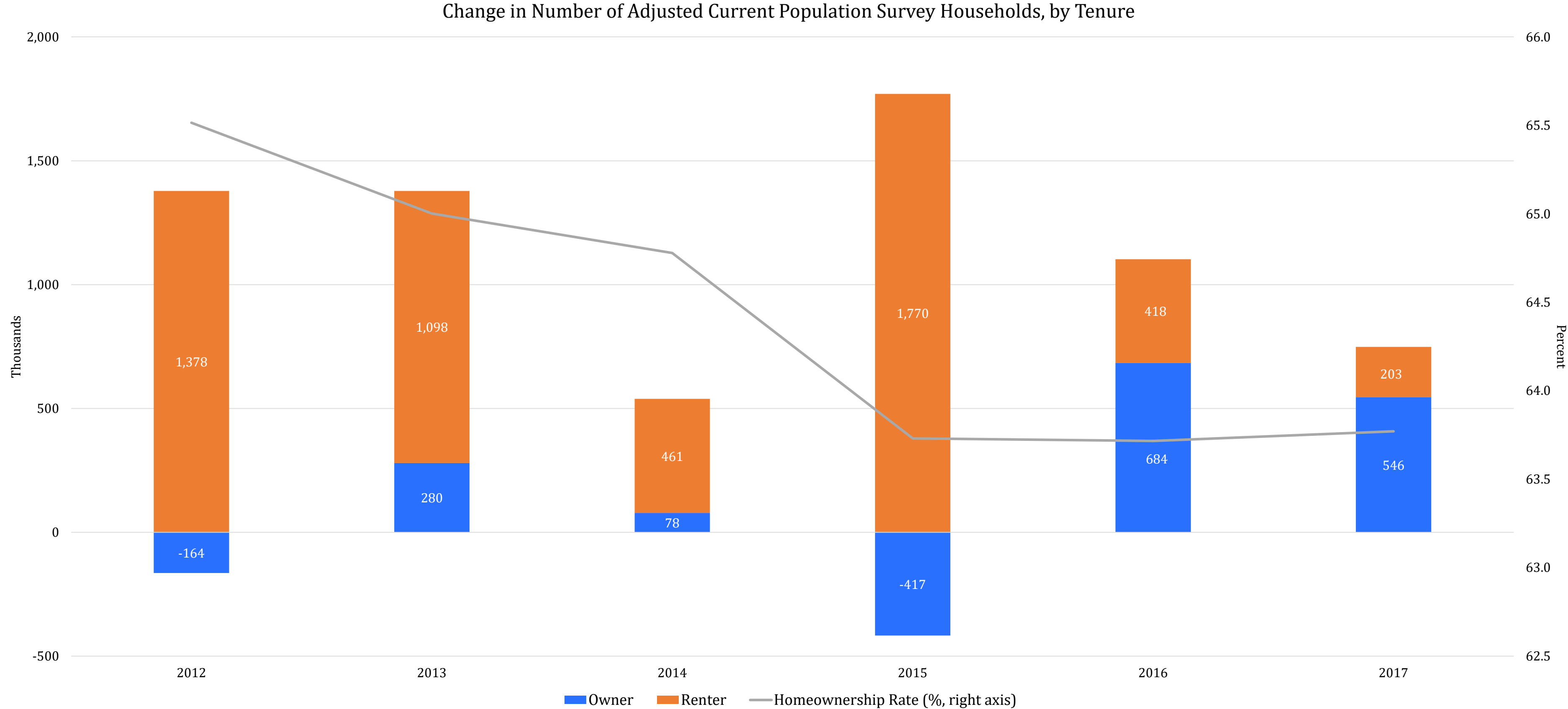
Alternate Data Sources Provide Different Views of Household Formation



Source: Census, USPS, EIA

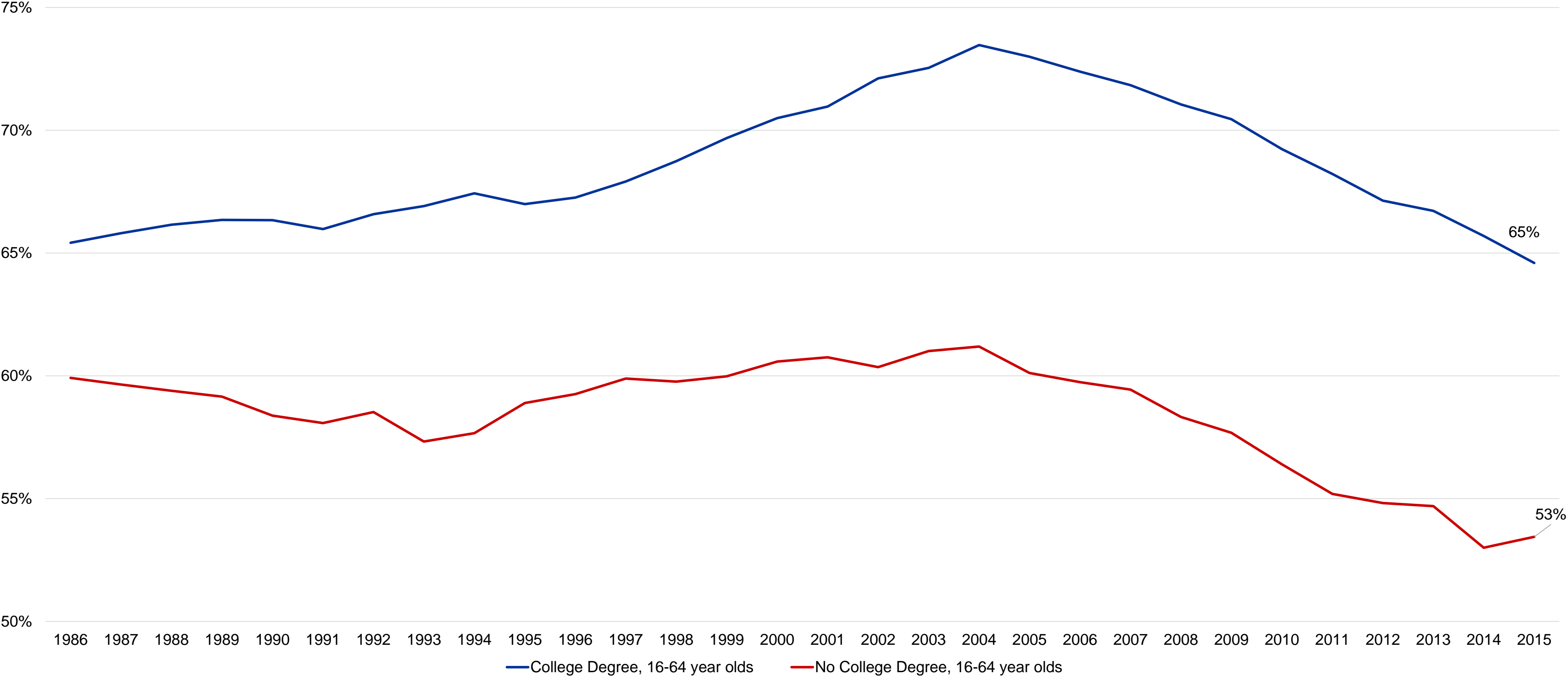


Homeownership Rate Stabilizing as Owner-Occupied Household Formation Rebounds



Diverging Homeownership Trends

Homeownership Rate of 16 – 64 Year Old Heads By Education

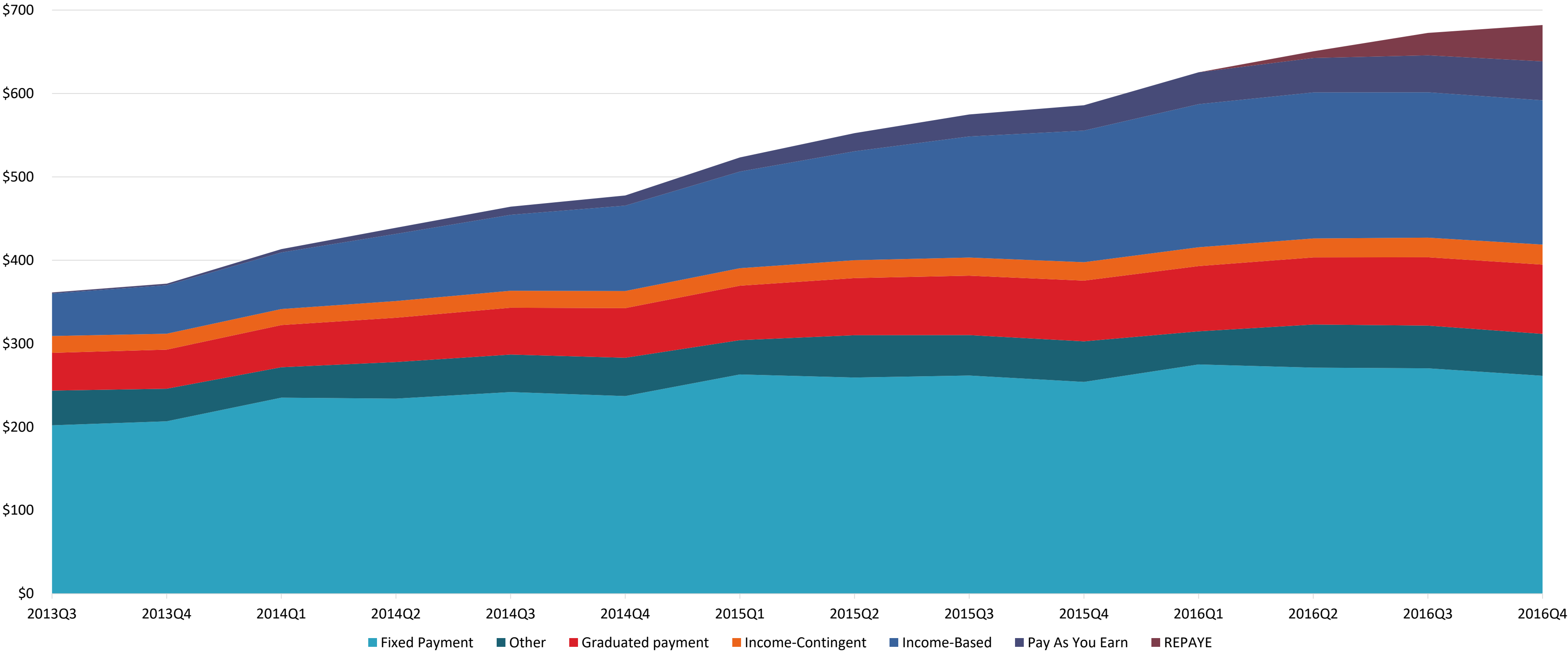


Source: IPUMS CPS, MBA



The Rise of Alternative Student Debt Repayment Plans

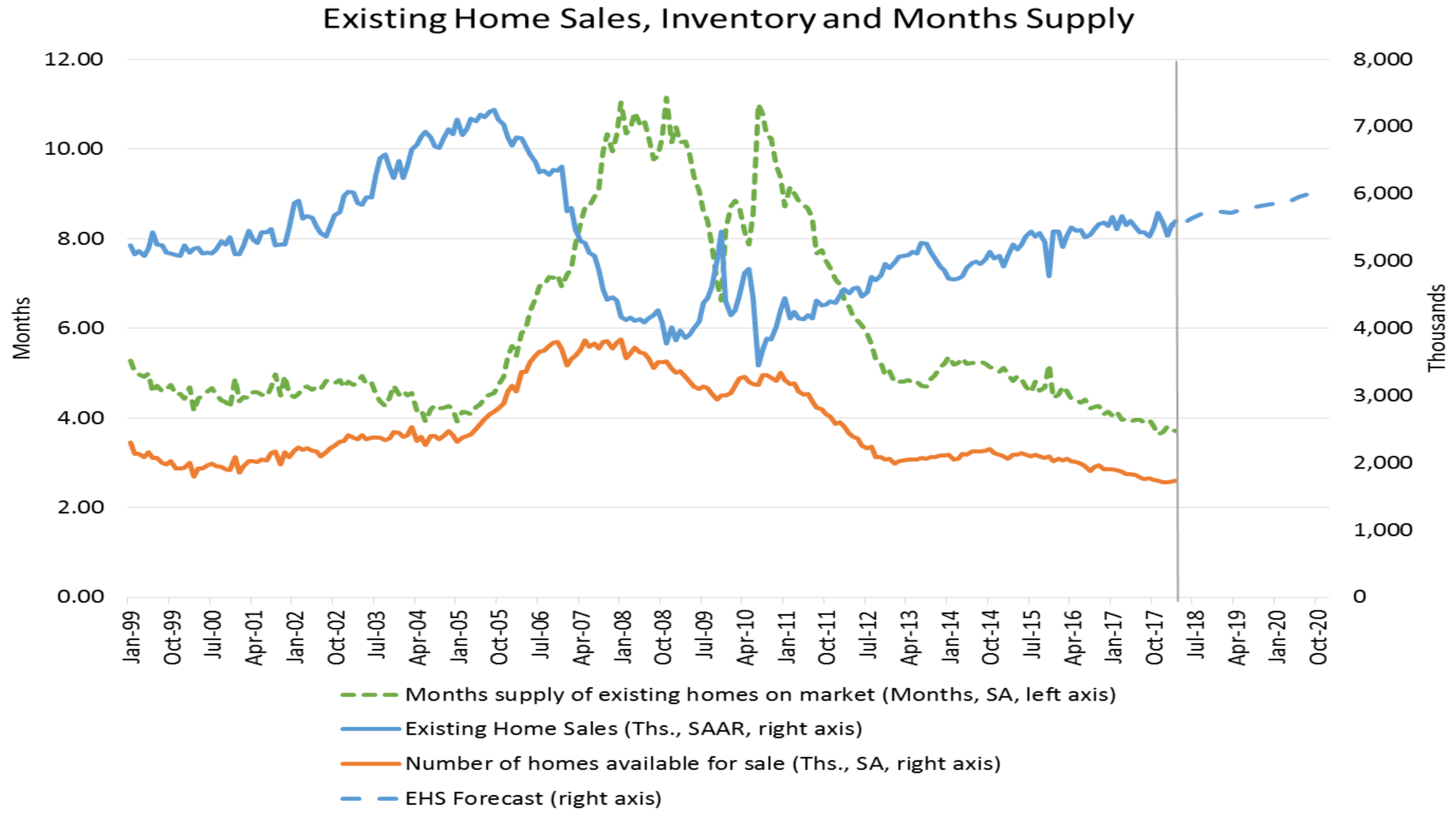
Chart of the Week - January 27, 2017
 Federal Direct Student Loans in Repayment (\$B), By Repayment Type



Source: Office of Federal Student Aid and MBA

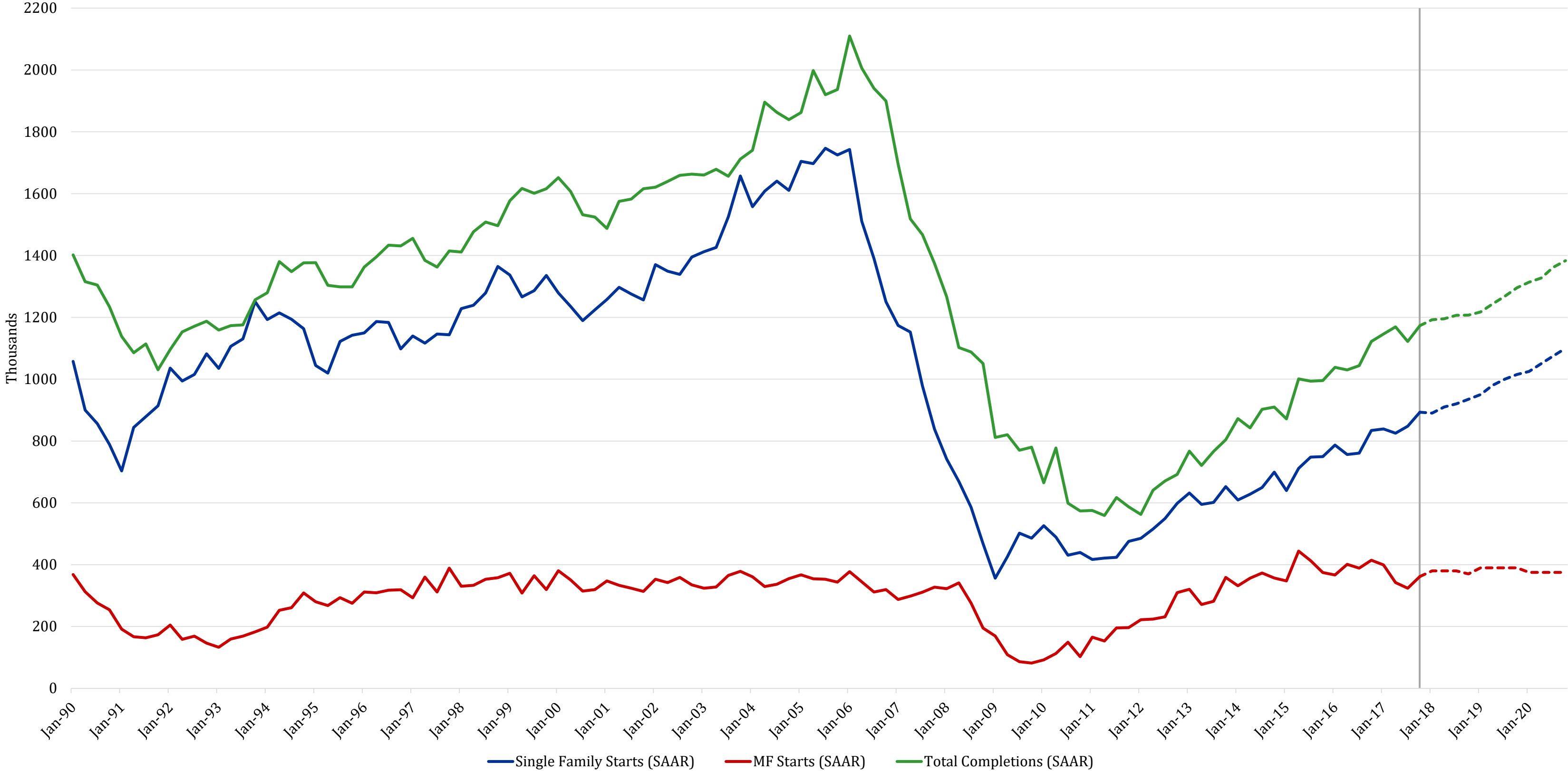


Declining Inventories for Sale Constraining Existing Home Sales

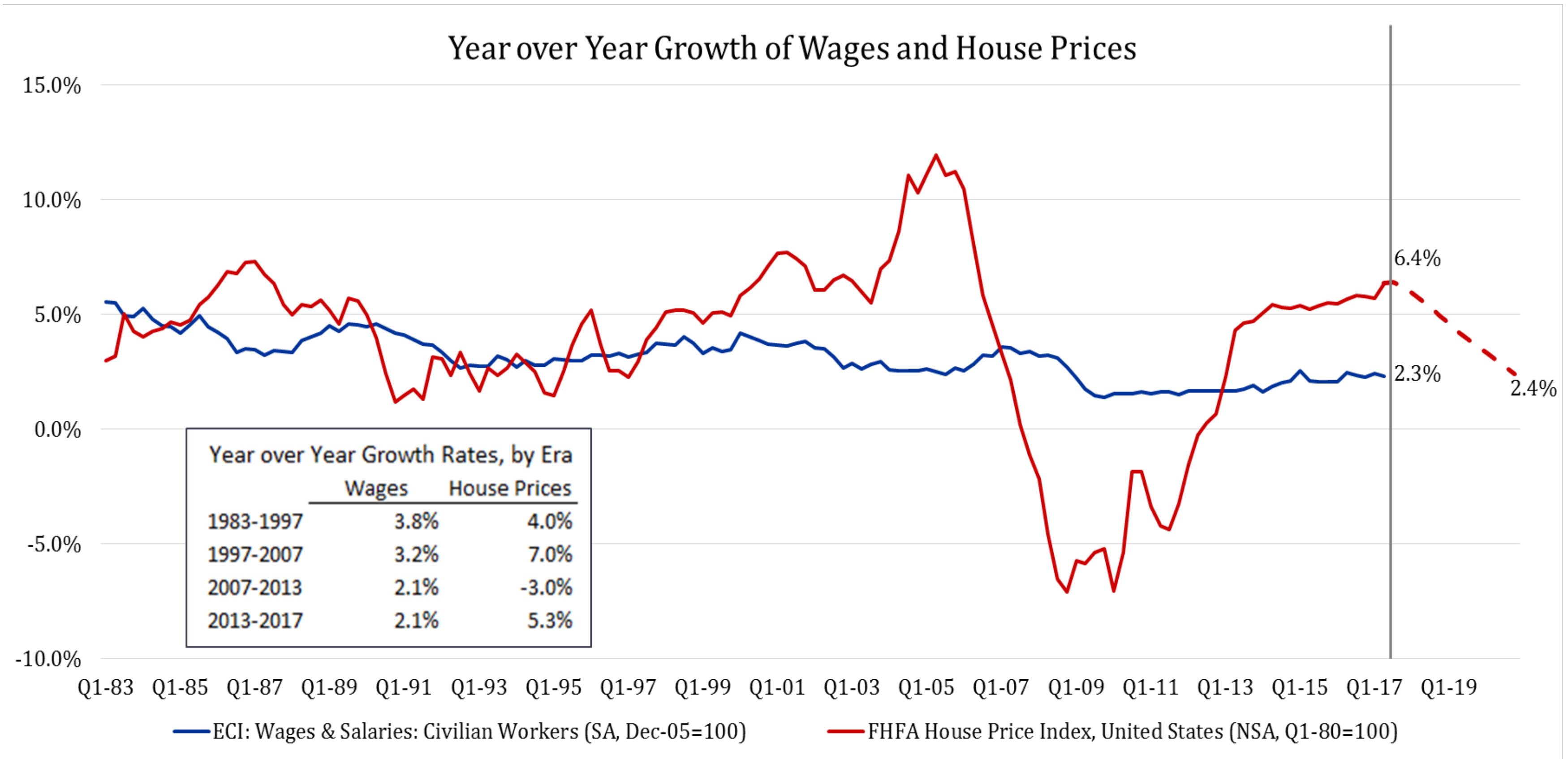


Single Family Starts Still Gathering Steam; MF Steady

Single and Multifamily Housing Starts
(Seasonally adjusted annualized rate)



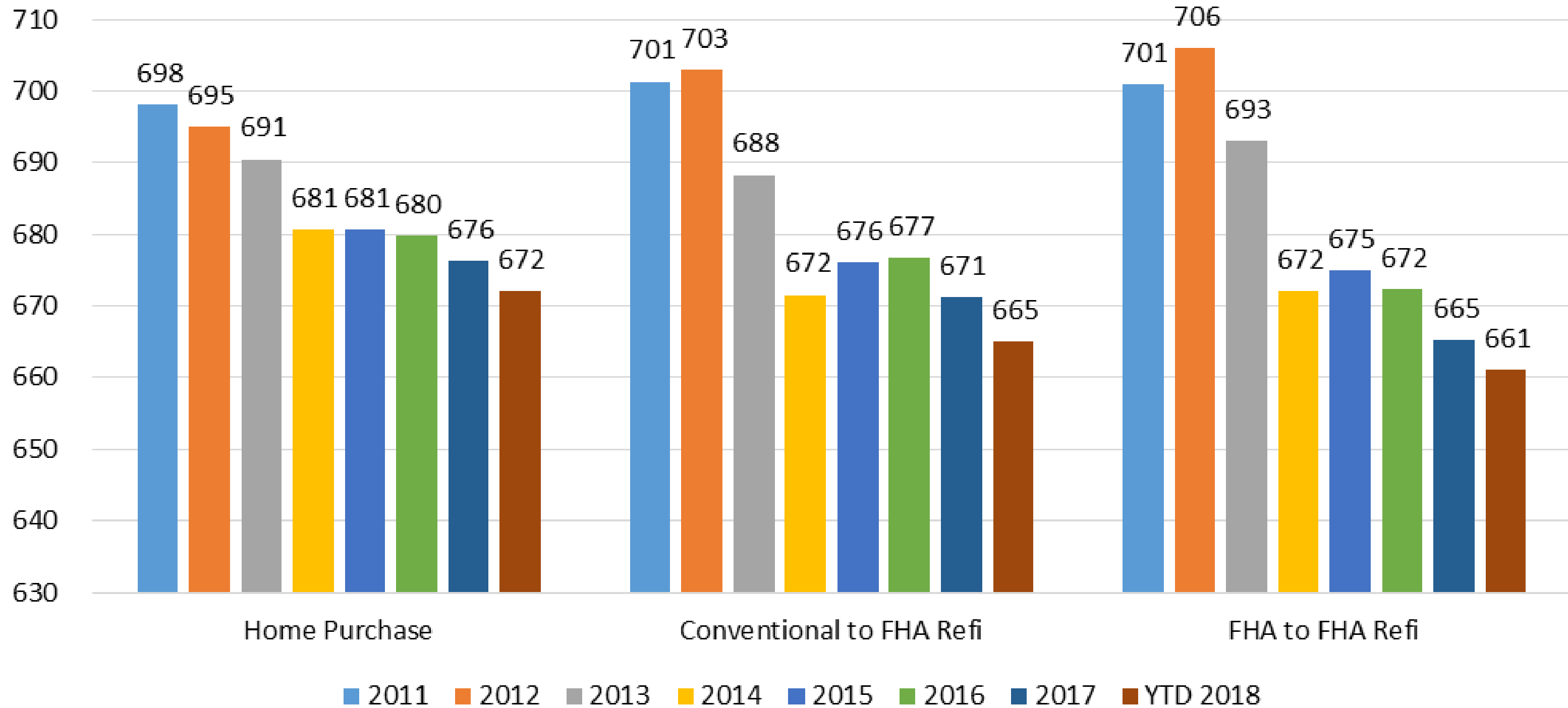
House Price Growth Outpacing Income Growth; Price Gains to Slow



FHA Credit Easing

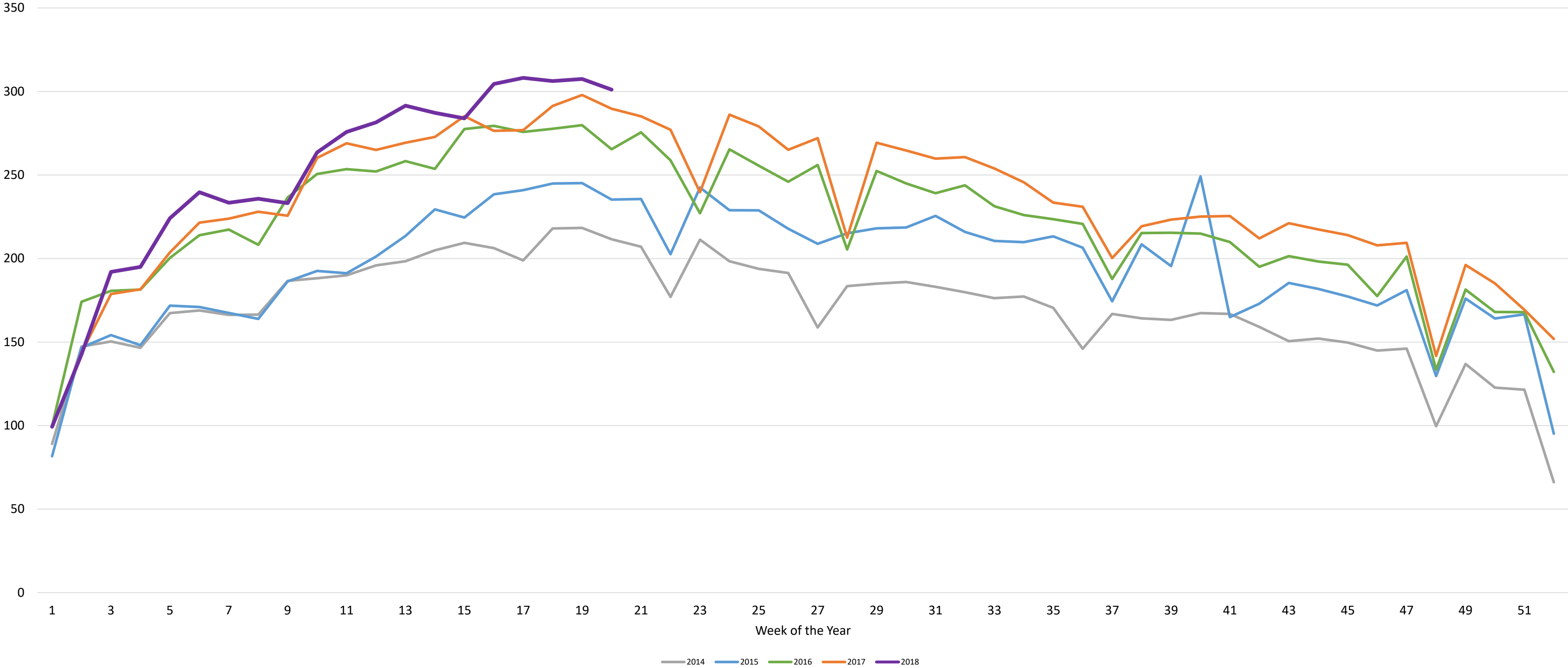
FHA Average Credit Scores on New Endorsements

Fully underwritten only, excludes streamlines



Purchase Volume Rising: Seasonality Increasing in Importance

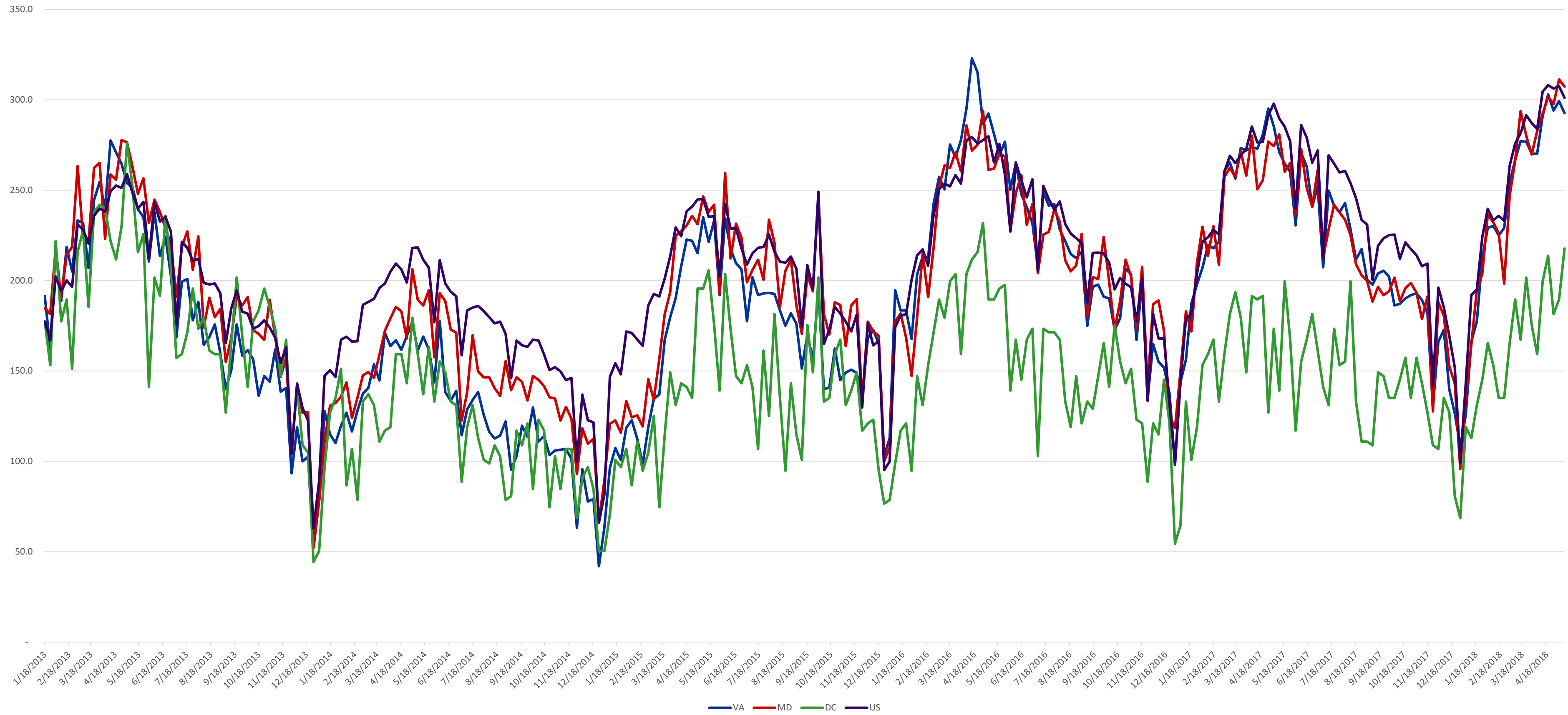
Purchase Mortgage Applications Index
(by week of the year, NSA)



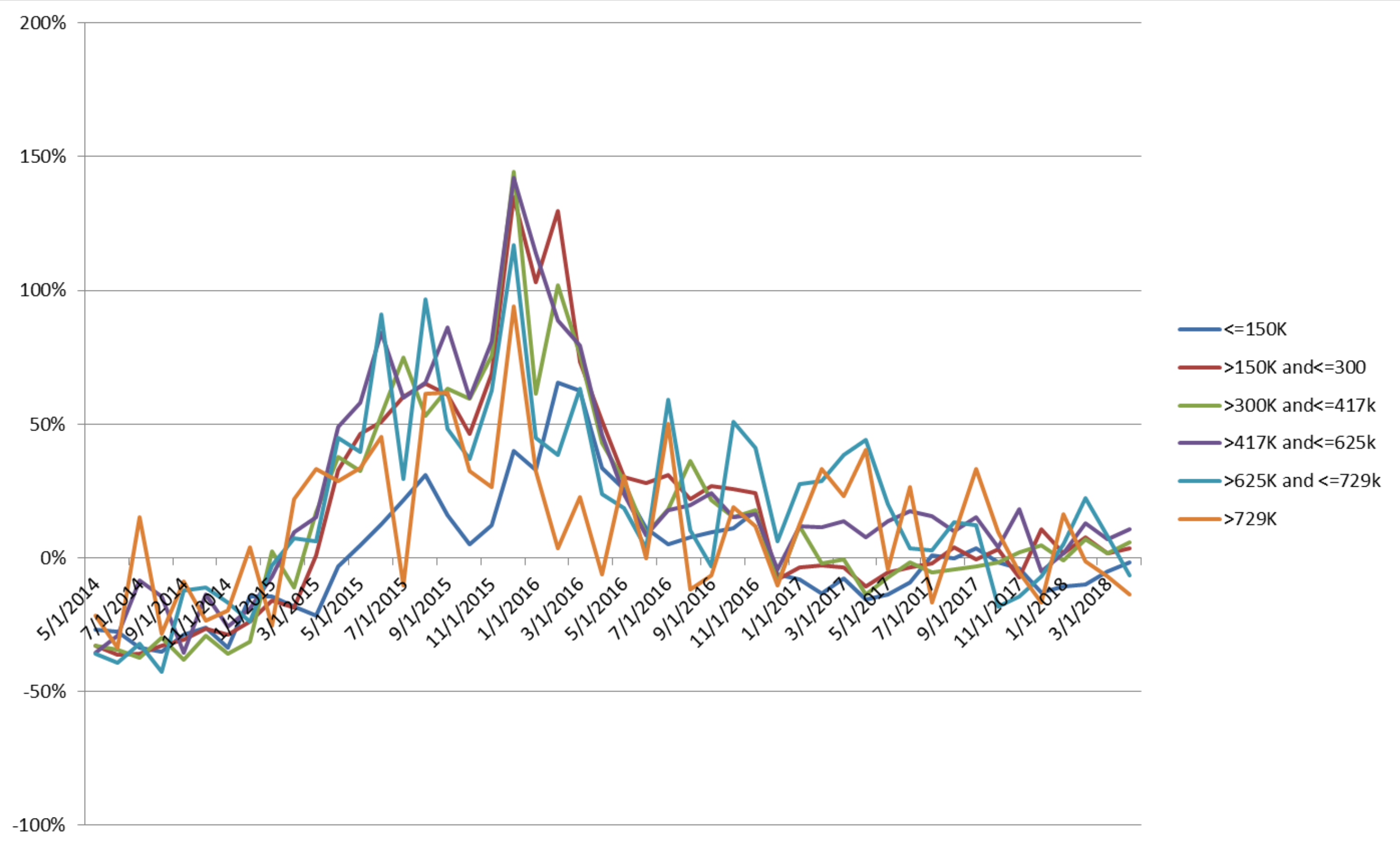
Source: MBA Weekly Applications Survey



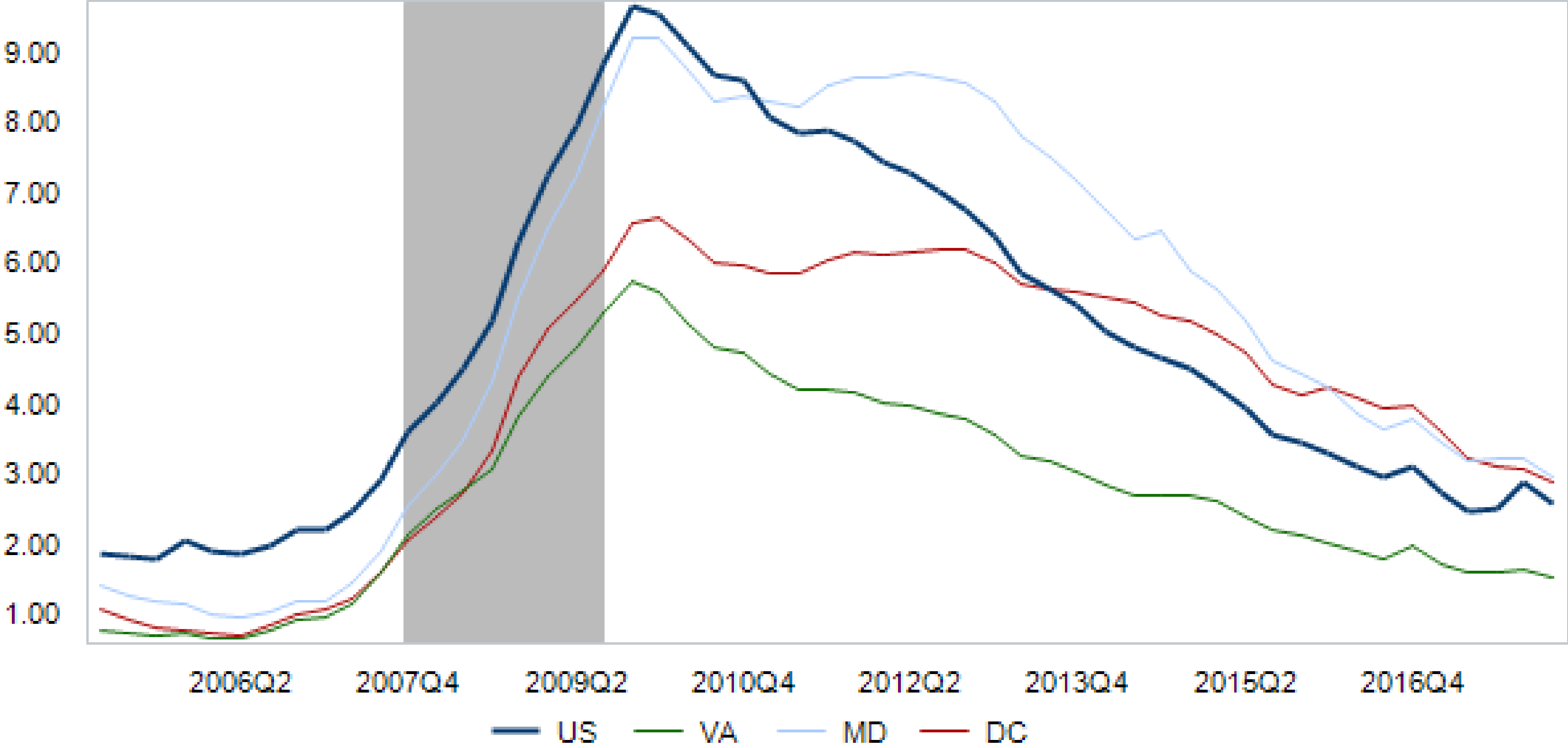
Purchase Application Index (NSA)



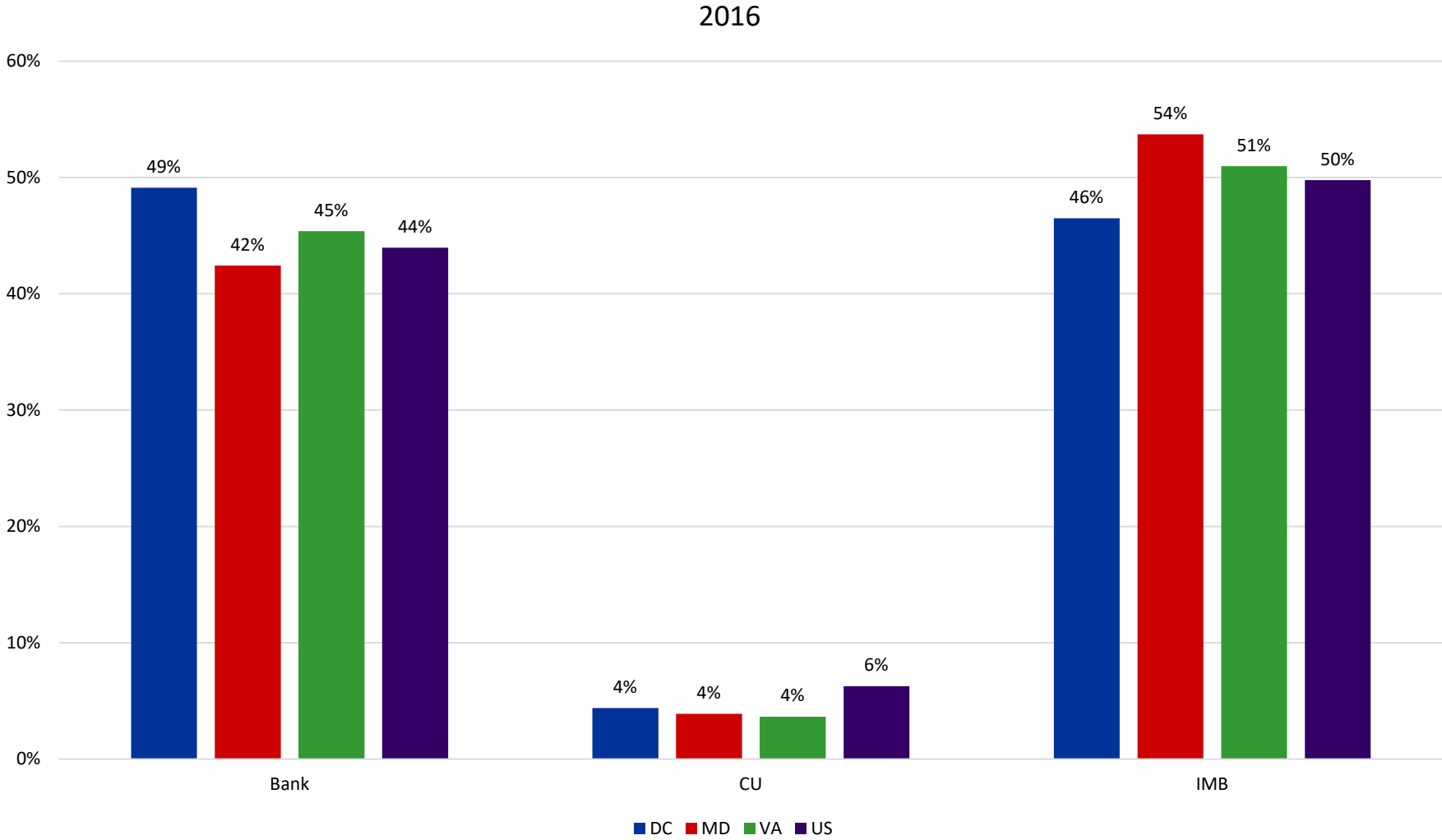
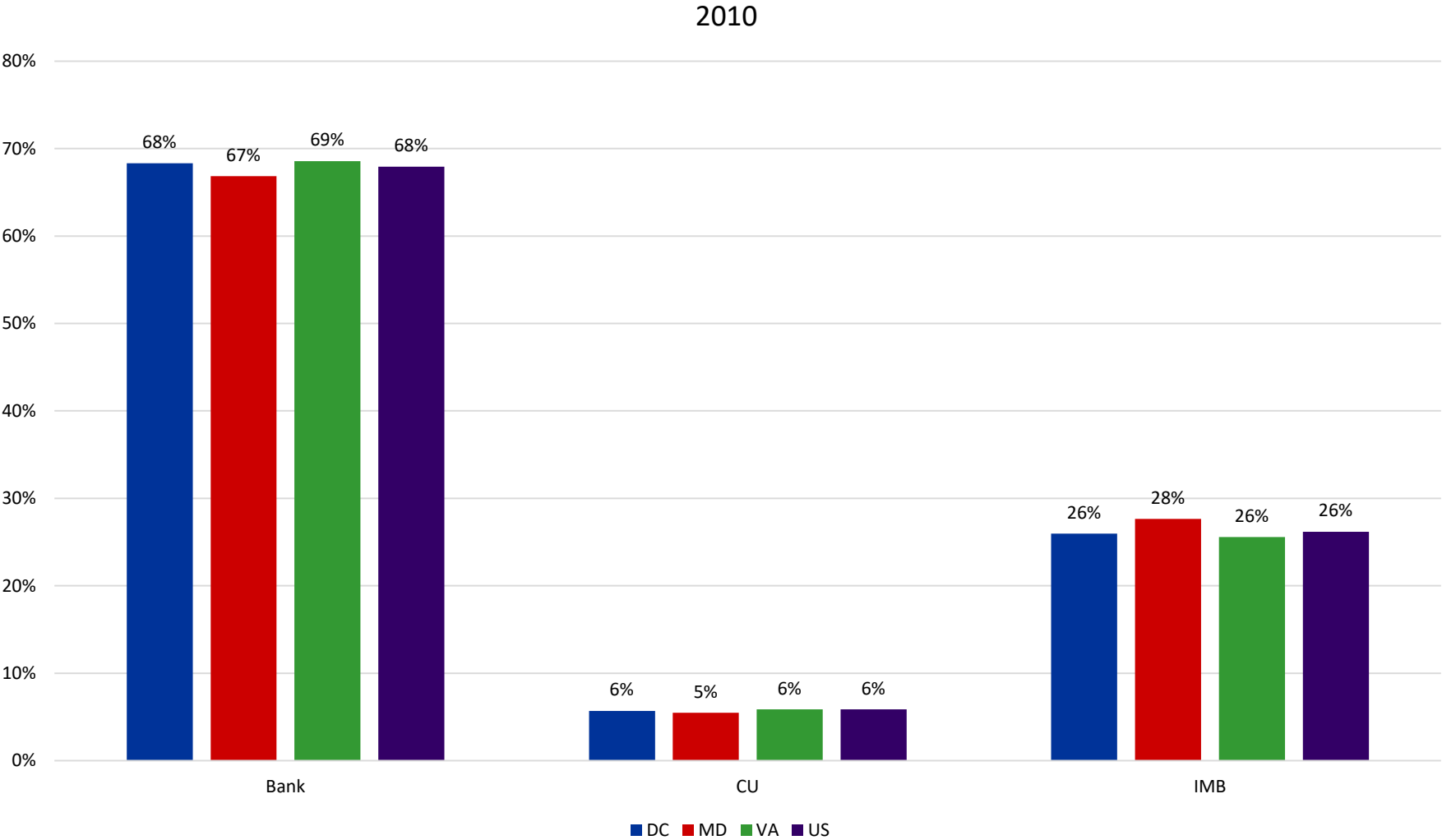
YoY Change in Purchase Applications by Loan Size Tranche for VA



Seriously Delinquent Rate (% , NSA)



IMB Share: 2016 vs. 2010



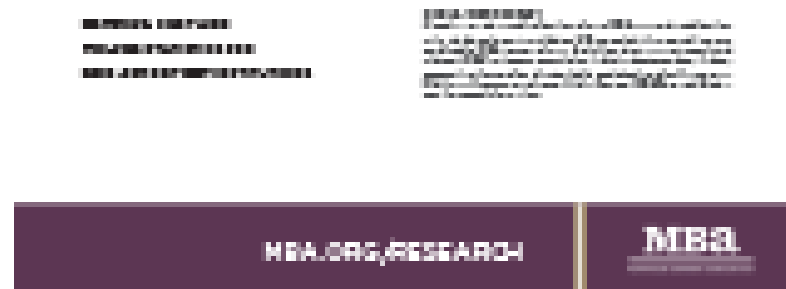
Product Mix

	Composition			
	DC	MD	VA	US
Conventional	68%	52%	52%	60%
Conventional Jumbo Loan	22%	6%	5%	6%
FHA	7%	28%	21%	22%
USDA (FSA/ RHS)	0%	3%	3%	3%
VA	4%	11%	19%	9%

Industry Going Digital – Eventually “e”

- Drivers and obstacles
 - Lender cost pressures
 - Competitive pressures – Consumer experience
 - Lender interest and capability
 - Technological challenges and opportunities
 - Information security/cyberthreats
- Successes
 - FHA eSignature Policy change
 - IRS eSignatures on the Tax Transcript Request
 - MISMO adoption
 - Automated verification of income, assets, and employment
- Still in Play
 - Ginnie Mae, warehouse lender, FHLB system acceptance of eNotes.
 - e/Remote Notarization – consistency in laws and acceptability across state lines. MBA involved with many other trade groups and state lawmakers to create consistency
 - PIWs, AVMS, other valuation alternatives

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