

## Everitt Real Estate Center

*“Northern Colorado Commercial Real Estate  
Forecast, 2012 to 2016”*



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# Cautionary notes and words of wisdom

*"Those who have knowledge, don't predict.  
Those who predict, don't have knowledge."*

--Lao Tzu, 6th Century BC Chinese Poet

*"Prediction is very difficult, especially if it's  
about the future."*

--Nils Bohr, Nobel laureate in Physics

*"An unsophisticated forecaster uses statistics  
as a drunken man uses lamp-posts - for  
support rather than for illumination."*

--After Andrew Lang

*"An economist is an expert who will know  
tomorrow why the things he predicted  
yesterday didn't happen today."*

--Evan Esar

*"If you can look into the seeds of time, and  
say which grain will grow and which will not,  
speak then unto me."*

--William Shakespeare

*"I always avoid prophesying beforehand  
because it is much better to prophesy after  
the event has already taken place."*

--Winston Churchill

*"I never think of the future, it  
comes soon enough."*

-- Albert Einstein

# Introduction

One of the Everitt Real Estate Center's mission is to educate the Northern Colorado commercial and residential real estate industries. As such, we introduce our inaugural<sup>1</sup> office and retail forecasts for the two major metropolitan statistical areas (MSA) in our area: **Fort Collins-Loveland** and **Greeley**.

We recognize the perils of forecasting especially during challenging economic times when news on the economy and real estate markets can quickly change overnight. Nonetheless, our maturing markets provide sufficient historical data to apply standard industry models to theoretically forecast demand, supply, vacancy, and rents.

Our base and alternative forecasts are meant as guideposts to the industry, and are based on economic forecasts as of June 2011. We know that national and regional economic climates have already changed in the interim. Private and public decisions regarding new developments or redevelopments over the next five years will have consequences that will likely alter our forecasts and thus impact future vacancies, rents, and ultimately property values.

We trust you challenge our analysis and provide constructive feedback as time unfolds.

<sup>1</sup> Residential forecasts for single-family and multi-family will be released during our 1<sup>st</sup> quarter 2012 event.



# Reviewing the past

We first **introduce historical analysis** on general employment (nonfarm), construction, government, and office-using sectors for our two MSAs. These graphs clearly show that over the last 40 years our markets have evolved as we've not only grown in numbers, but also spatially as population and employment increased across the land and region.

What is also clear are the **structural changes that have occurred**. Look not only at the cyclical nature and trends of each employment sector over the last few decades, but visually identify amplitudes of the each cycle and lags between sectors. Who's leading and who's lagging?

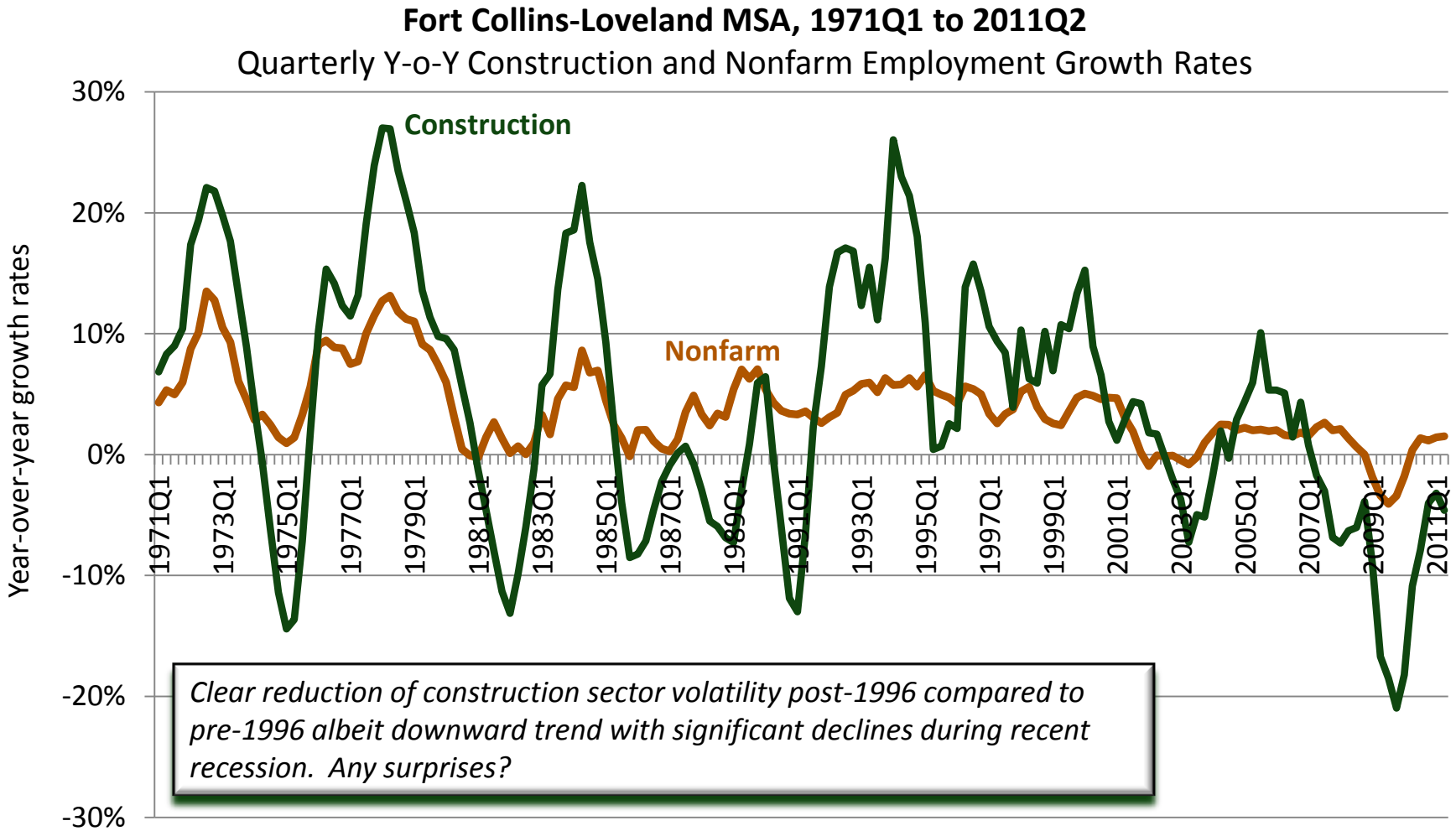
Prior to the forecasts, we also **examine the history of the office and retail markets** for the two MSAs. These graphs allow us to examine economic demand drivers and supply responses and to identify potential models that explain demand and supply interactions. Similar to other MSAs in our population range, at times our markets exhibit '*supply-side*' economics – build it and they will come, or new stock is absorbed upon completion. There are obviously no guarantees whether or not such patterns will continue in the future especially as the global, national, and regional economies and real estate capital markets attempt to crawl out of their respective recessionary holes.

We appreciate the interest of the Northern Colorado commercial real estate industry in our research and invite you to join us in our endeavors to understand our unique markets.

Everitt Real Estate Center, September 2011

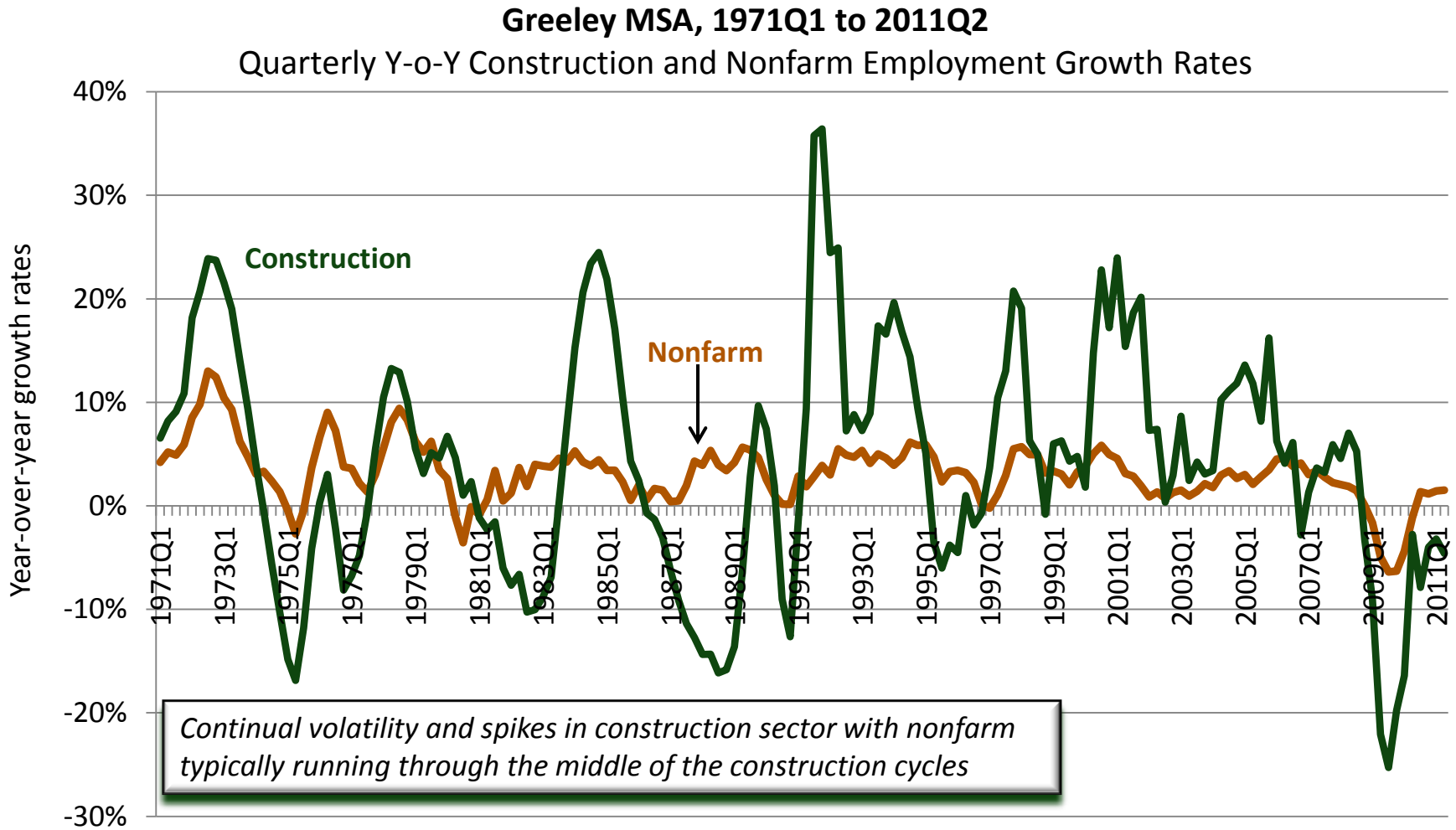
The Everitt Real Estate Center nor any person acting on behalf thereof, makes any warranty or representation, express or implied, with respect to the accuracy, completeness or usefulness of the information contained in this report nor that its use substitutes for standard industry due diligence practices or methods regarding future real estate developments or investments.

# Two eras: pre- and post-1996



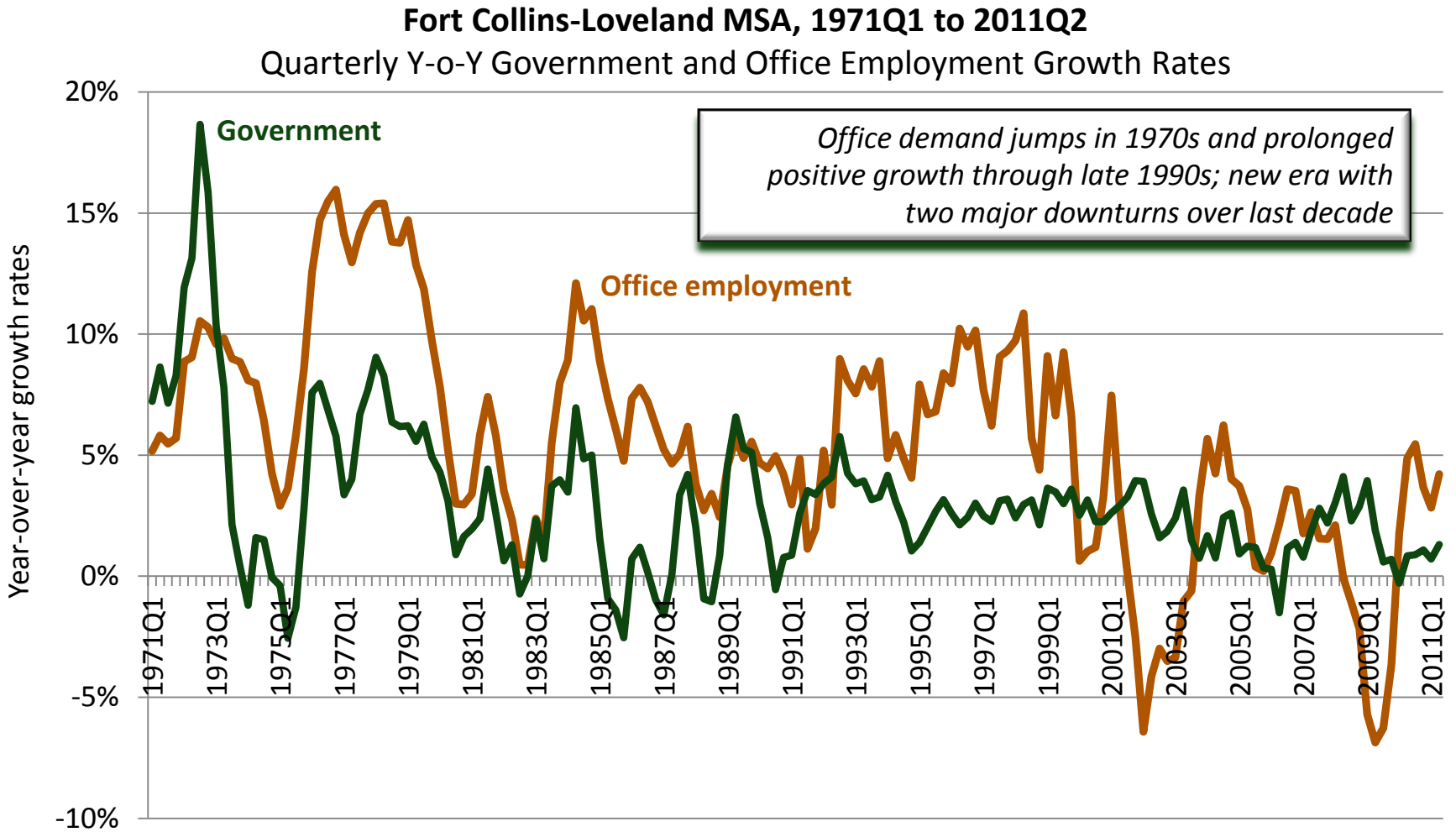
Source: Bureau of Labor Statistics, Everitt Real Estate Center

# Spikes vs. stability trends



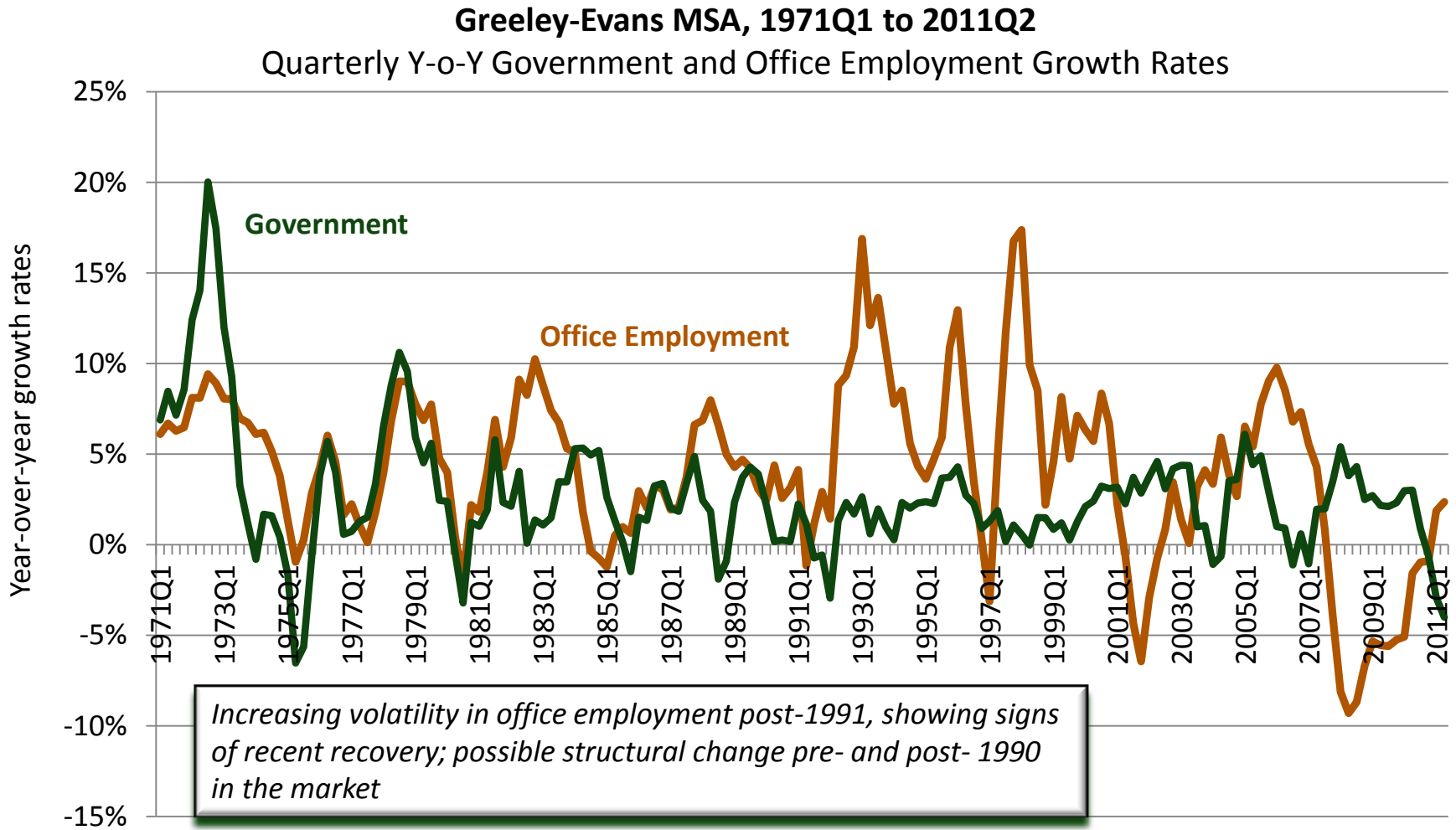
Source: Bureau of Labor Statistics, Everitt Real Estate Center

# Jumps, growth, and recoveries



Source: Bureau of Labor Statistics, Everitt Real Estate Center (government includes federal, state, and local)

# Large recent swings in office employment

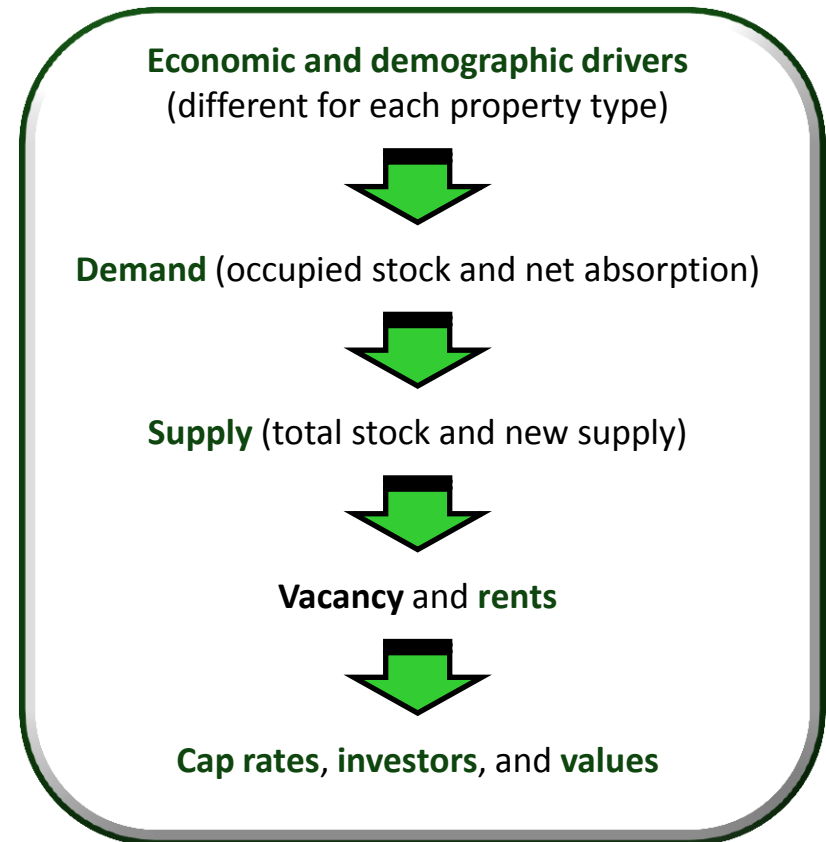


Source: Bureau of Labor Statistics, Everitt Real Estate Center (government includes federal, state, and local)

# Integrating economics and real estate

What are the linkages between economics, demographics, and real estate performance and values? In order to forecast office and retail markets it's important to understand the economic and demographic variables that explain demand and supply. Once demand and supply are known, vacancy rates are a simple calculation. Next, vacancy rates will impact rent growth rates and finally affect cap rates, investor interest, and values.

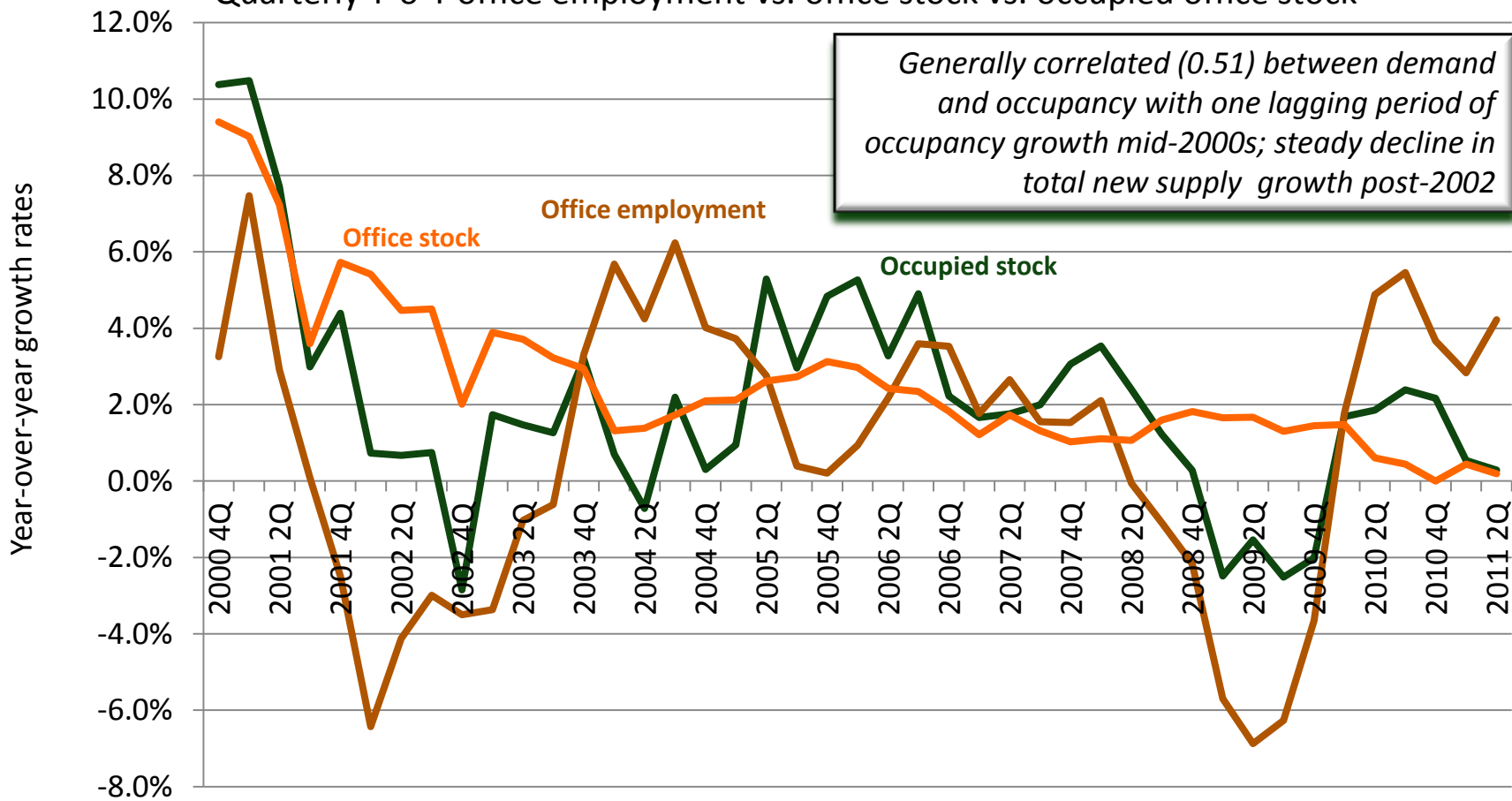
The following charts track the historical relationship between economics, demographics, and real estate performance for office and retail for our two MSAs. Where are the relationships, which variable is leading and which lagging, and is it rational to explain occupancy or new supply trends?



# How will recent increases in demand impact market?

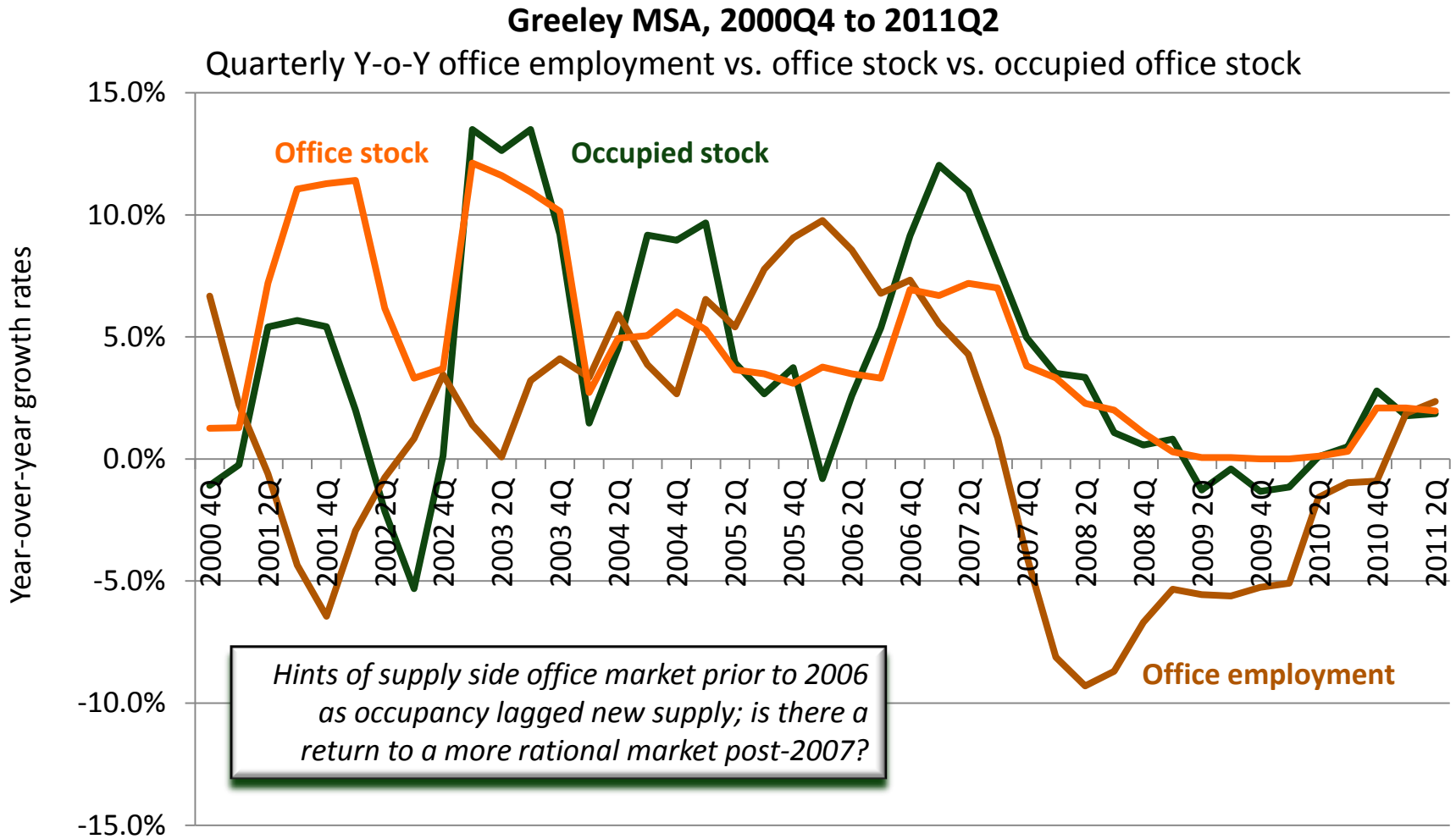
## Fort Collins-Loveland MSA, 2000Q4 to 2011Q2

Quarterly Y-o-Y office employment vs. office stock vs. occupied office stock



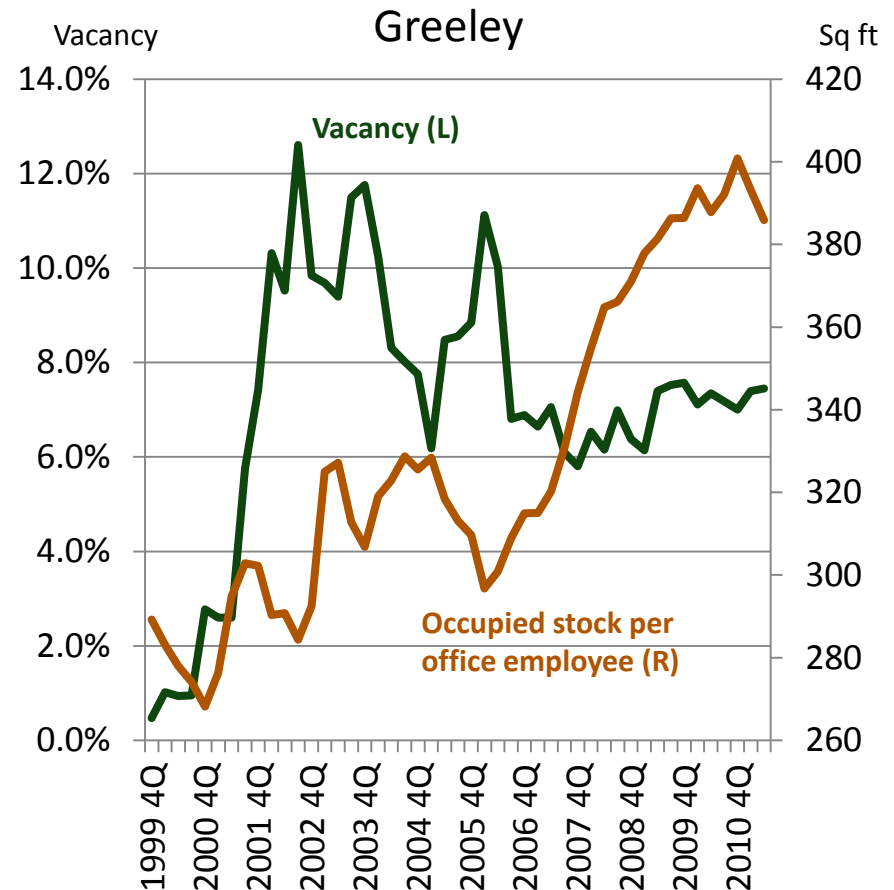
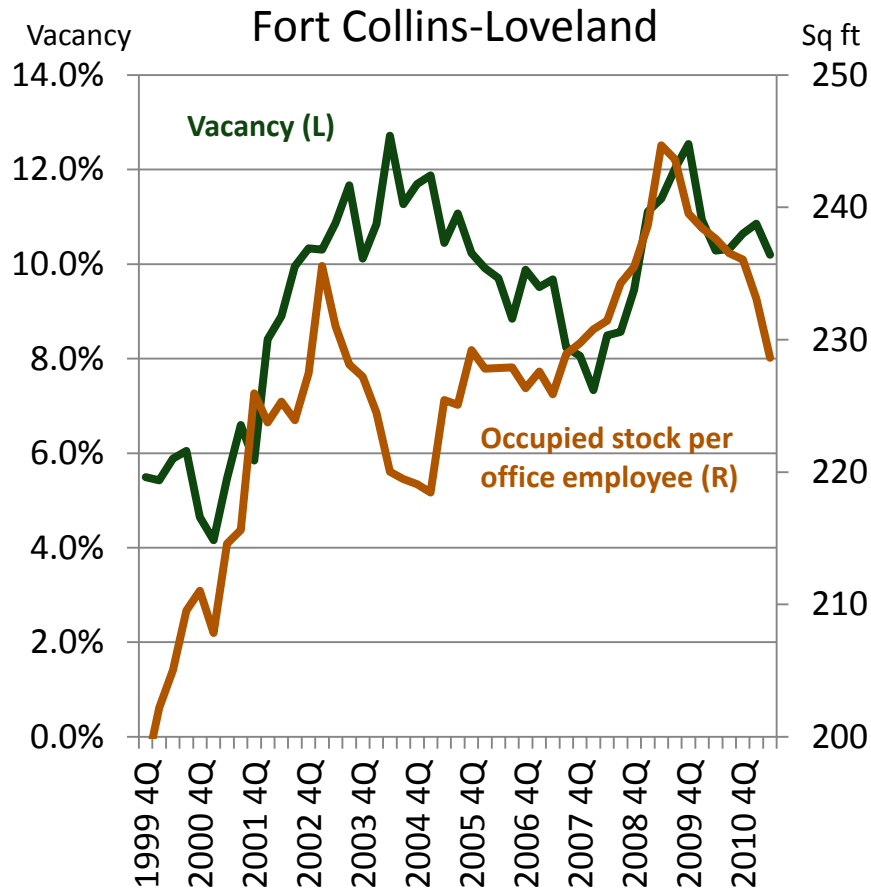
Source: Bureau of Labor Statistics, Everitt Real Estate Center, and CoStar

# Supply side vs. rational market traces



Source: Bureau of Labor Statistics, Everitt Real Estate Center, and CoStar

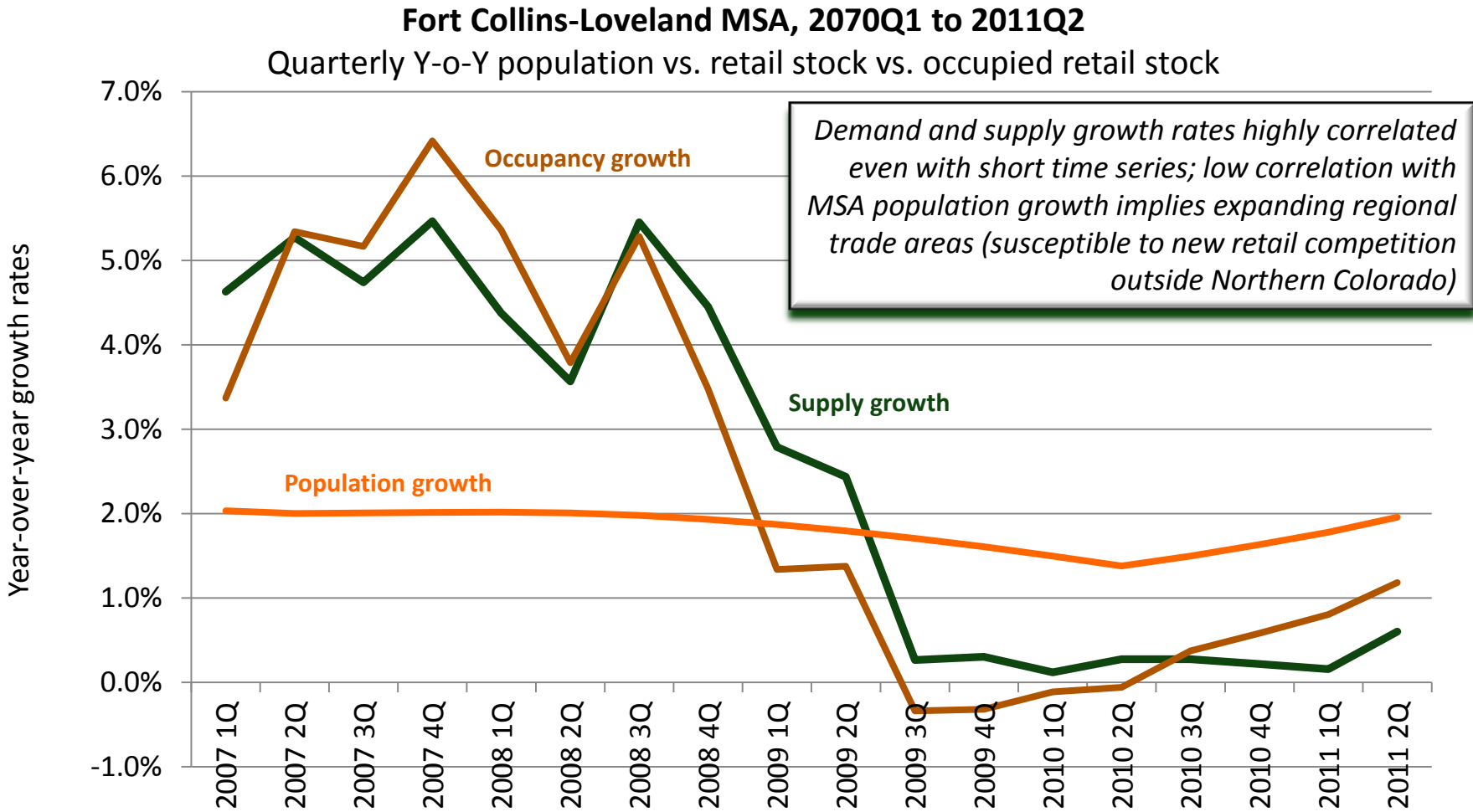
# Will productivity eventually impact NoCo demand?



Source: Bureau of Labor Statistics, Everitt Real Estate Center, and CoStar

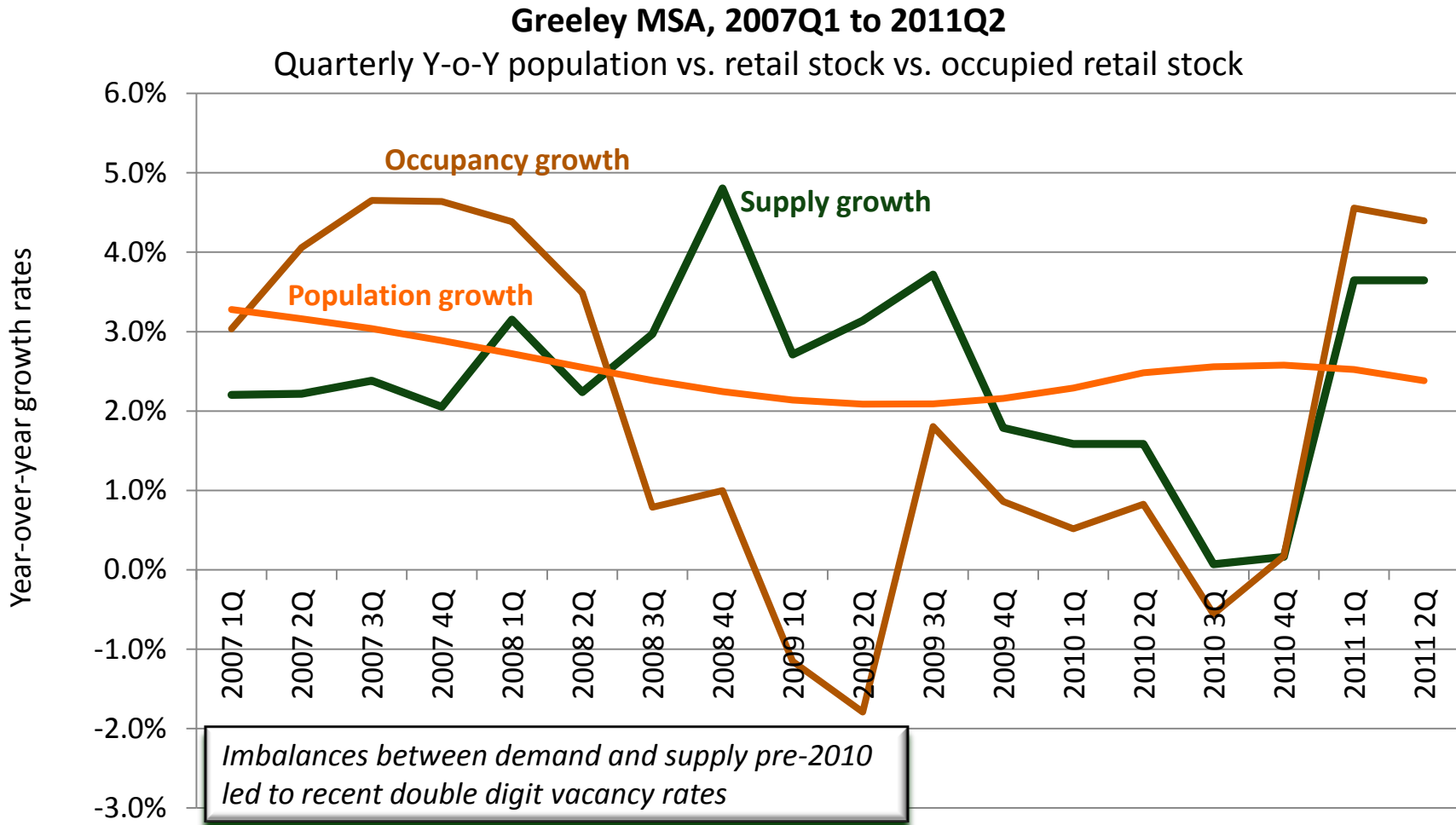
*Productivity increases in the office sector will result in less space required per new office employee in the future; once 'jobless' recovery turns into actual jobs, marginal increases in occupied stock growth may be less impacted by office employment growth. Critical need to monitor this relationship.*

# How much will external growth drive future retail demand?



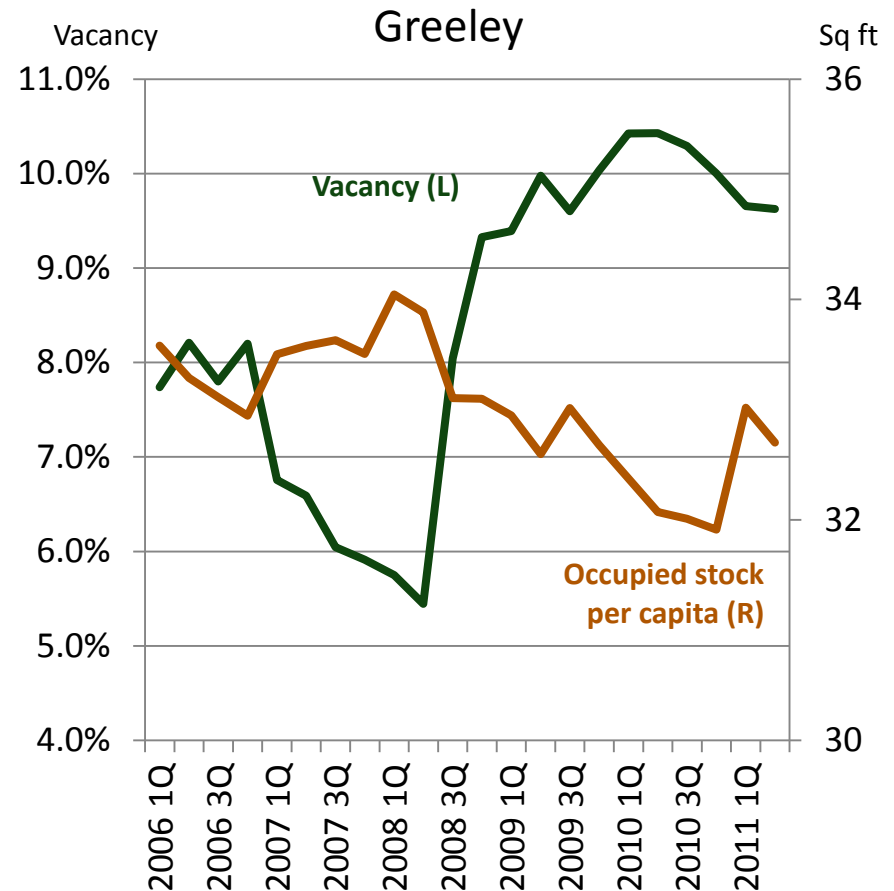
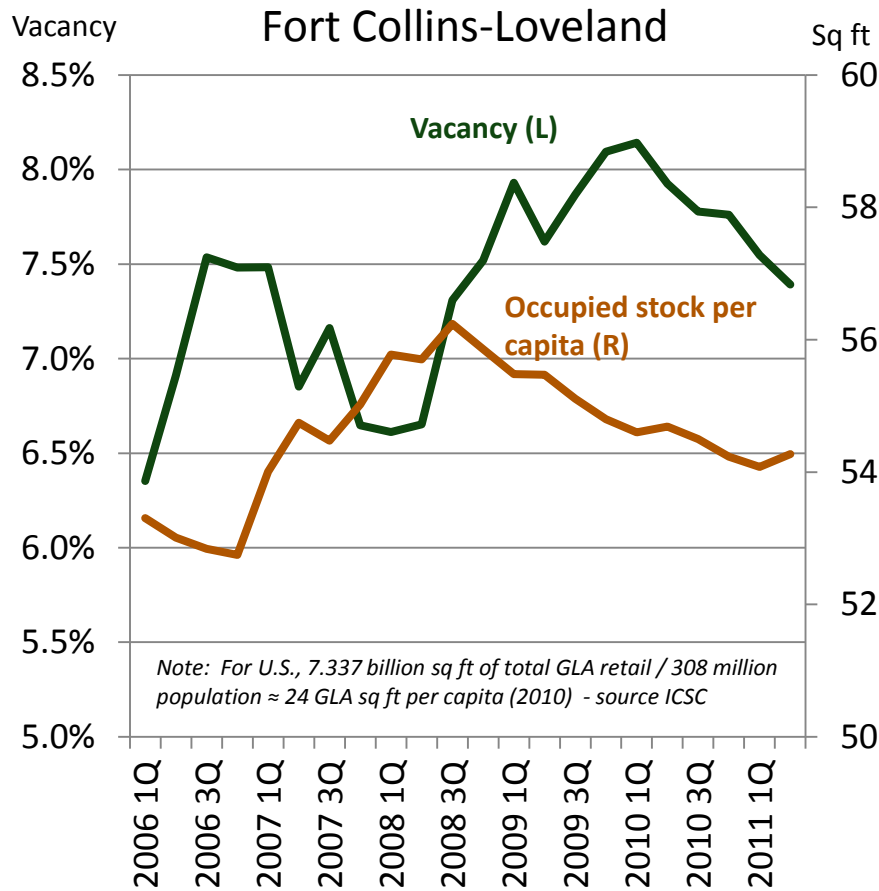
Source: Bureau of Labor Statistics, Everitt Real Estate Center, and CoStar

# Greeley retail seeking new equilibrium



Source: Bureau of Labor Statistics, Everitt Real Estate Center, and CoStar

# Discrepancy of $\approx 20$ sq ft per capita



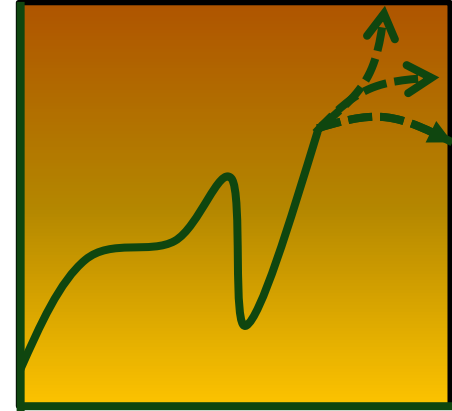
Source: Bureau of Labor Statistics, Everitt Real Estate Center, and CoStar

*Higher vacancy rates but less occupied sq ft per capita (Greeley) vs. lower vacancy rates but higher occupied stock per capita – different impacts to development, leasing, and operation strategies*

# Background on forecast modeling

Is it possible to model Northern Colorado's office and retail markets? The short answer is yes, but the next question is how much of the variability of the markets, e.g., changes in new supply, net absorption, and rents, can the models explain?

In order to model our office and retail markets, it is necessary to 'smooth' the periodic random events such as spikes in new supply or net absorption. Random and consistent (oxymoron?) – are characteristics that describe the last decade of Northern Colorado's commercial real estate markets. Periods of inactivity can be quickly followed by hyper-activity as the previous graphs illustrate.



We apply industry and academic models for office and retail models and use standard independent variables such as office employment, population, household incomes, and Gross Metro Product (GMP). Additionally, we use a technique that includes lagged variables such as last quarter's vacancy rate to estimate the current period vacancy rate.

We present two forecast models for each market and property type: (1) a base model using June 2011 economic forecasts that assume a relatively slow, but smooth economic recovery, and (2) an alternative model that infuses a much slower economic recovery, although not assuming a double-dip recession in 2011 or 2012. We do include estimated ranges for a double-dip recession in the final summary analysis.

The truth over the next five years will likely fluctuate somewhere between the boundaries estimated by either model. Once again our caveat – because our models are based on four-quarter moving averages, our data may not exactly equal third-party information providers. We present, however, a 'story' about our future and trust the market and respective stakeholders in the building of our future.

# Forecast models – *the Greek stuff*

Property type	Demand, new supply, and rent models
Office	$D_t = B_0 + B_1D_{t-1} + B_2D_{t-3} + B_3A_{t-1} + B_4A_{t-3} + B_5G_t + B_6G_{t-4} + \epsilon$ $A_t = B_0 + B_1D_{t-1} + B_2D_{t-2} + B_3D_{t-3} + B_4D_{t-4} + B_5A_{t-1} + B_6A_{t-2} + B_7A_{t-3} + B_8A_{t-4} + B_9E_t + \epsilon$ $AR_t = B_0 + B_1AR_{t-4} + B_2V_t + B_3G_t + \epsilon$
Retail	$D_t = B_0 + B_1C_{t-1} + B_2R_{t-4} + \epsilon$ $A_t = B_0 + B_1D_t + B_2M_t + \epsilon$ $R_t = B_0 + B_1R_{t-1} + B_2V_{t-1} + B_3G_t + \epsilon \text{ (Greeley)}$ $R_t = B_0 + B_1R_{t-1} + B_2V_{t-1} + \epsilon \text{ (Fort Collins-Loveland)}$

D = New Deliveries (quarterly moving average)

C = Sq. Ft. under Construction (quarterly moving average)

R = Average Rent per sq. ft.

A = Total Net absorption (quarterly moving average)

M = Median Household Income Growth Rate (quarterly moving average)

V = Vacancy Rate (quarterly moving average)

G = Gross Metro Product Growth Rate (quarterly moving average)

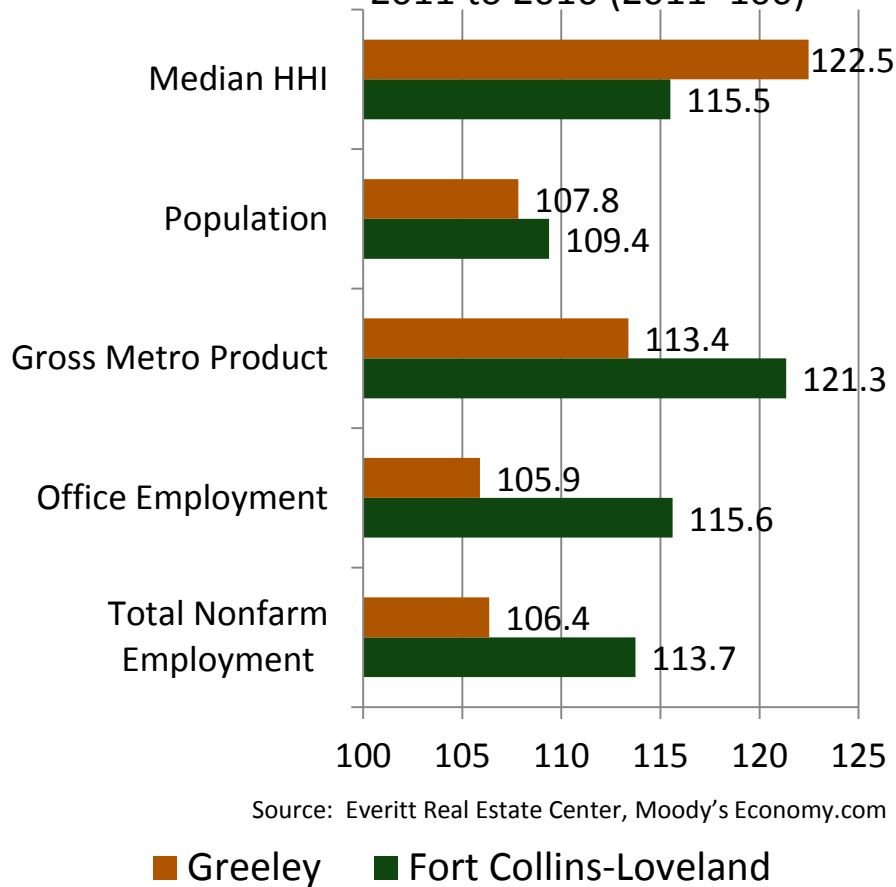
E = Office Employment Growth Rate (quarterly moving average)

AR = Average Rent per sq. ft Year-on-Year Growth Rate

T = Time (T = present quarter, T<sub>-1</sub> = previous quarter, etc...)

# Benchmarking economic assumptions

Select Economic Forecasts  
2011 to 2016 (2011=100)



The chart to the left benchmarks the level or value of each economic variable at the end of 2011 to equal 100. The forecast value for 2016 is then adjusted based on the value of 2011 at 100 and based on the following equation:

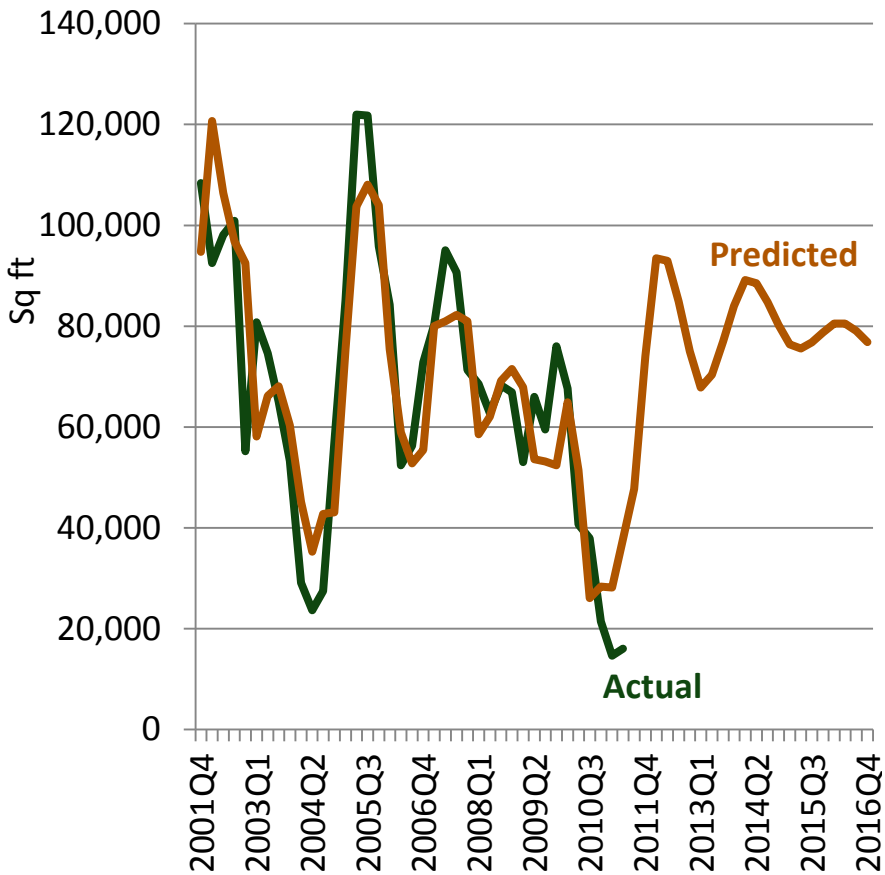
$$(2016 \text{ value} * 100) / 2011 \text{ value} = 2016 \text{ index}$$

The chart highlights expected changes over the next five years for critical variables used in our models to estimate future demand and supply.

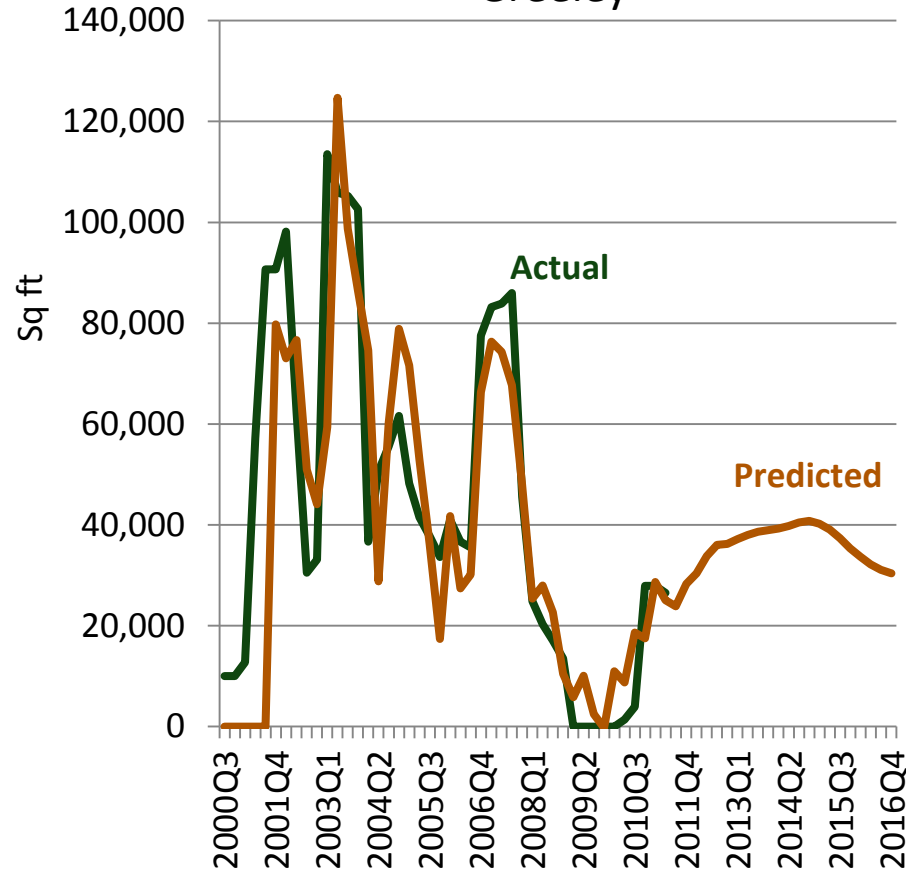
Although the Fort Collins-Loveland MSA has higher forecasts for nonfarm employment, office employment and gross metro product, Greeley's growth in median household income (HHI) will rationally impact future retail demand much higher than Fort Collins-Loveland's future retail demand.

# Office supply base models

## Fort Collins-Loveland

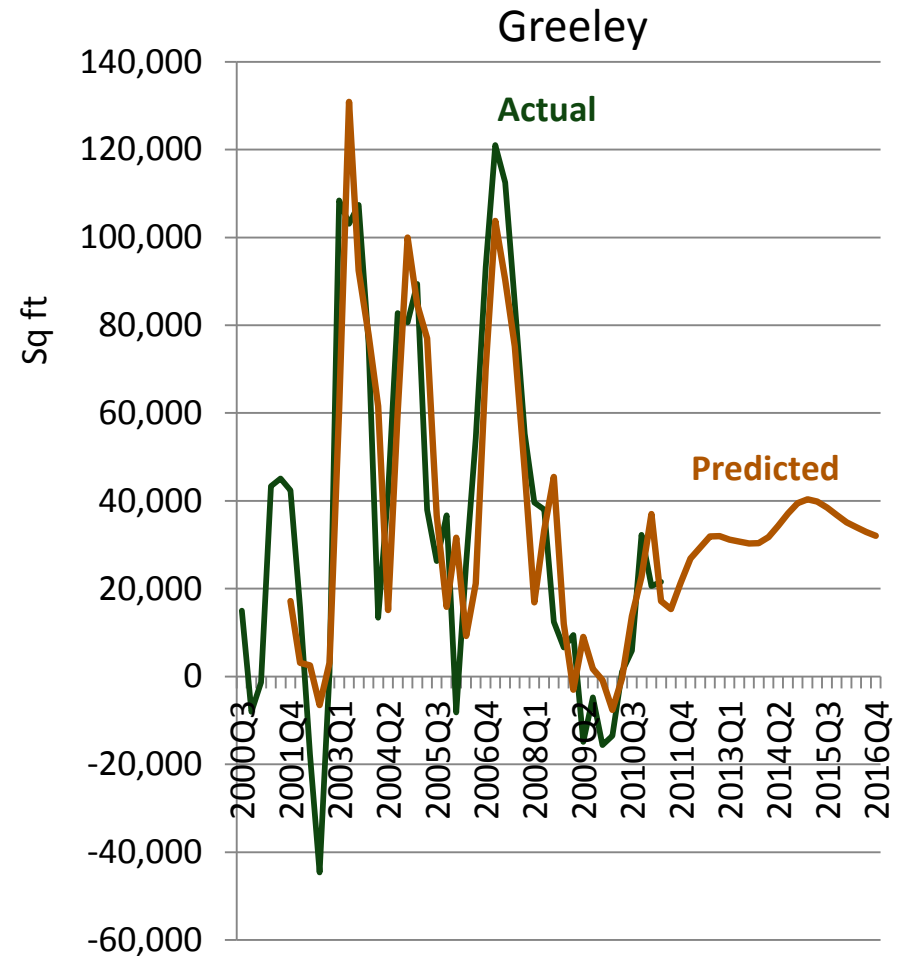
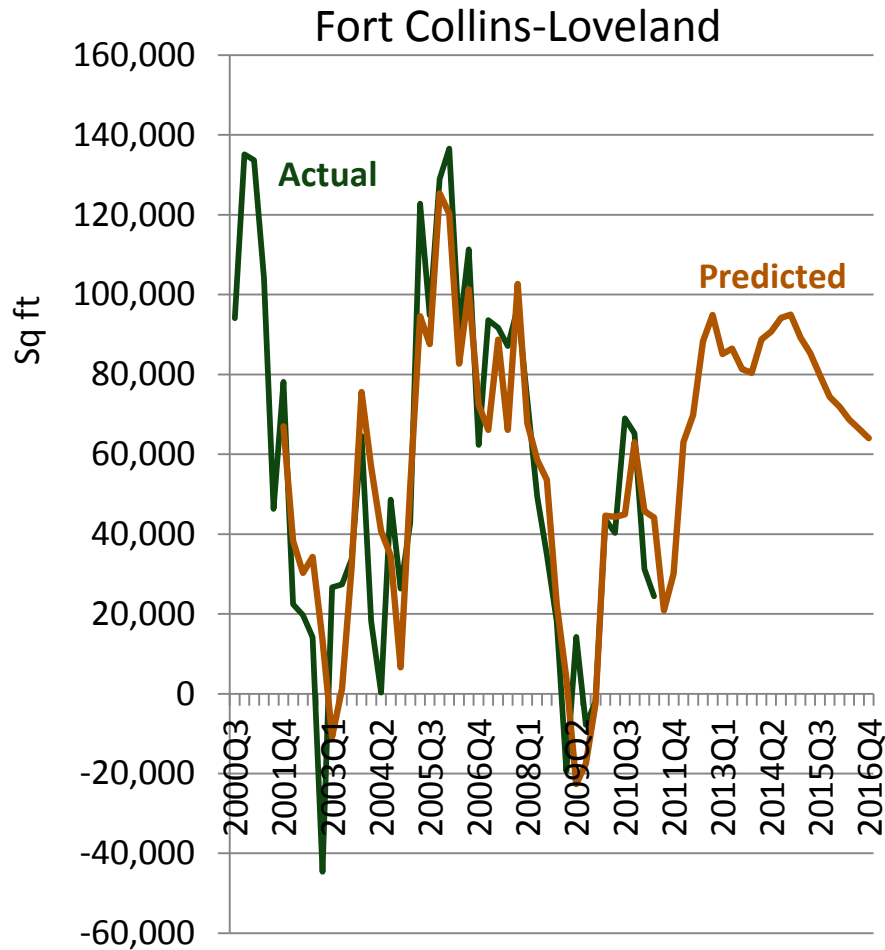


## Greeley



Source: Everitt Real Estate Center, Moody's Economy.com, CoStar

# Net absorption office base models



Source: Everitt Real Estate Center, Moody's Economy.com, CoStar

# Fort Collins-Loveland Office Forecast

Base Case Scenario

Year	Total stock	New supply	Occupied stock	Net absorption	Vacancy rate	Average rent
2011	9,909,543	270,140	8,744,984	119,977	11.75%	\$19.98
2012	10,209,588	300,046	9,124,595	379,612	10.63%	\$20.33
2013	10,545,603	336,015	9,446,240	321,644	10.42%	\$20.88
2014	10,866,747	321,143	9,825,984	379,744	9.58%	\$21.63
2015	11,181,658	314,911	10,123,322	297,338	9.46%	\$22.50
2016	11,489,098	307,440	10,379,456	256,134	9.66%	\$23.22

Alternative

Year	Total stock	New supply	Occupied stock	Net absorption	Vacancy rate	Average rent
2011	9,894,182	254,779	8,734,188	109,181	11.72%	\$19.80
2012	10,129,807	235,625	9,014,388	280,200	11.01%	\$19.66
2013	10,372,291	242,484	9,183,891	169,502	11.46%	\$19.56
2014	10,614,084	241,793	9,408,296	224,405	11.36%	\$19.35
2015	10,843,580	229,496	9,581,922	173,626	11.64%	\$19.11
2016	11,076,193	232,612	9,741,090	159,167	12.05%	\$18.65

Source: Everitt Real Estate Center, Moody's Economy.com, CoStar (all data in sq ft unless otherwise noted)

# Greeley Office Forecast

Base Case Scenario

Year	Total stock	New supply	Occupied stock	Net absorption	Vacancy rate	Average rent
2011	5,231,009	113,240	4,844,458	84,919	7.39%	\$15.52
2012	5,375,986	144,977	4,972,347	127,889	7.51%	\$15.74
2013	5,531,767	155,781	5,093,708	121,361	7.92%	\$15.74
2014	5,695,041	163,273	5,251,626	157,918	7.79%	\$15.70
2015	5,836,478	141,437	5,398,623	146,997	7.50%	\$15.56
2016	5,958,043	121,565	5,526,813	128,190	7.24%	\$15.48

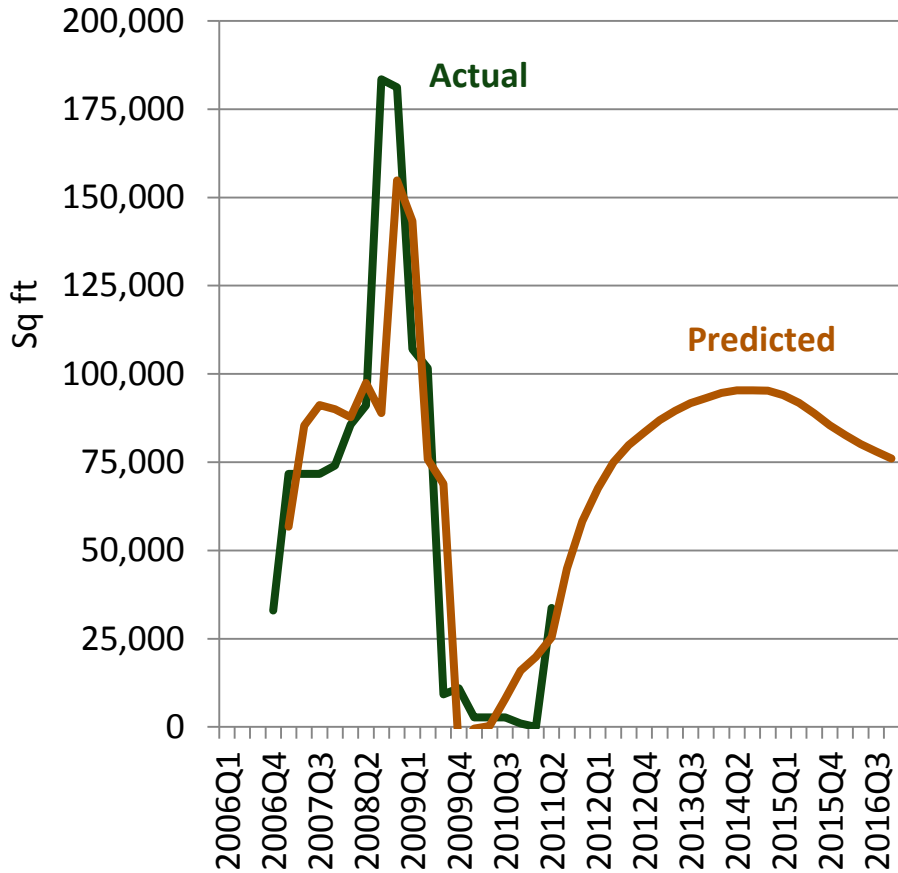
Alternative

Year	Total stock	New supply	Occupied stock	Net absorption	Vacancy rate	Average rent
2011	5,224,738	106,969	4,840,151	80,612	7.36%	\$15.22
2012	5,342,576	117,838	4,940,791	100,640	7.52%	\$14.85
2013	5,441,749	99,173	5,039,070	98,279	7.40%	\$14.51
2014	5,519,815	78,065	5,130,796	91,727	7.05%	\$14.12
2015	5,580,041	60,226	5,207,264	76,467	6.68%	\$13.71
2016	5,632,363	52,322	5,274,250	66,987	6.36%	\$13.33

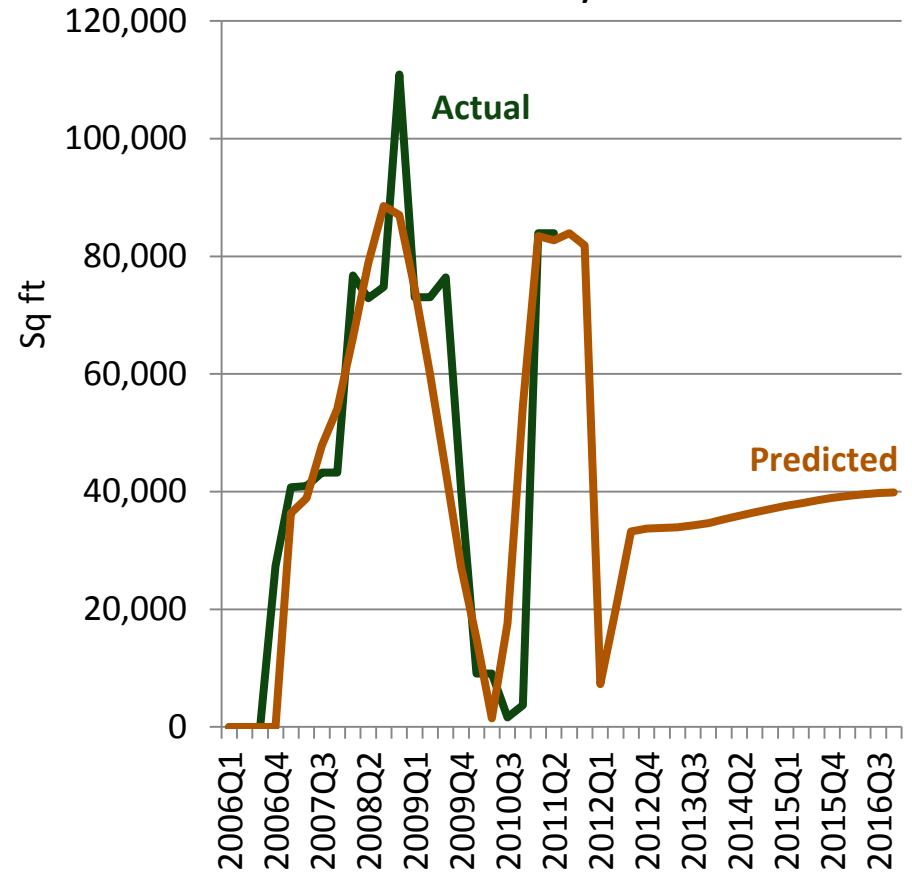
Source: Everitt Real Estate Center, Moody's Economy.com, CoStar (all data in sq ft unless otherwise noted)

# Retail supply base models

## Fort Collins-Loveland



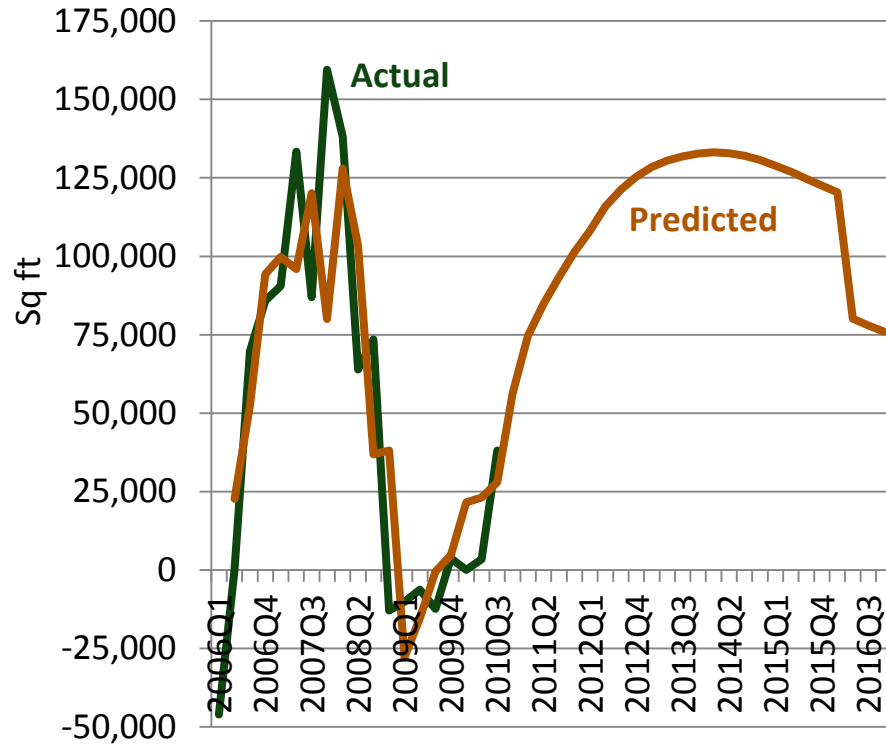
## Greeley



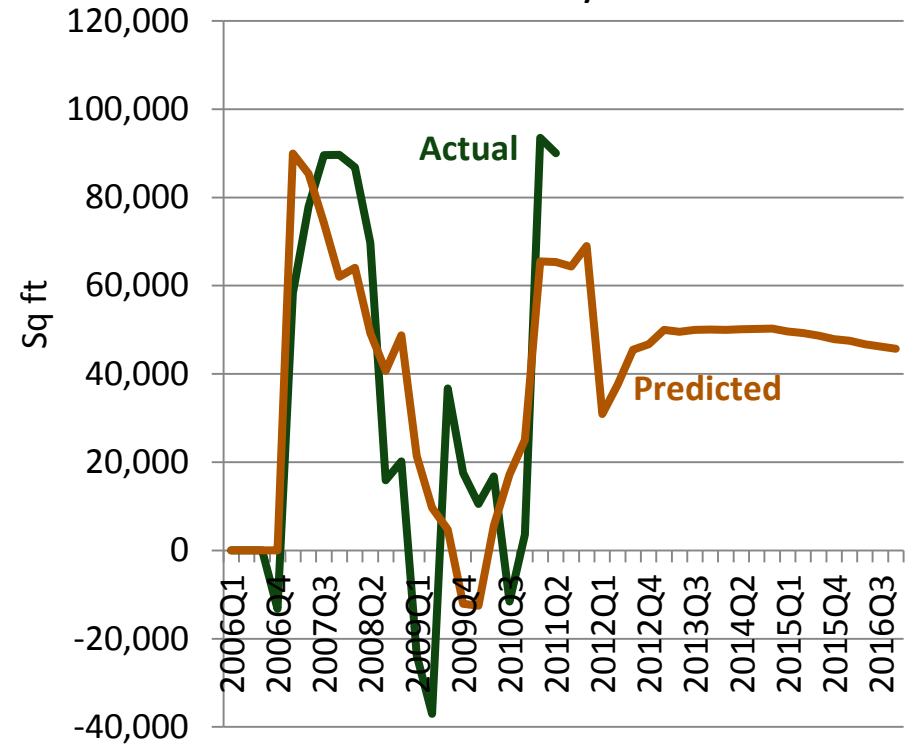
Source: Everitt Real Estate Center, Moody's Economy.com, CoStar

# Net absorption retail base models

## Fort Collins-Loveland



## Greeley



Source: Everitt Real Estate Center, Moody's Economy.com, CoStar

# Fort Collins-Loveland Retail Forecast

Base Case Scenario	Year	Total stock	New supply	Occupied stock	Net absorption	Vacancy rate	Average rent
	2011	10,858,192	178,266	9,927,006	235,427	8.58%	\$11.88
	2012	10,923,464	65,272	9,990,353	63,346	8.54%	\$12.20
	2013	11,013,439	89,975	10,077,320	86,967	8.50%	\$12.42
	2014	11,127,483	114,044	10,184,456	107,136	8.47%	\$12.56
	2015	11,257,226	129,744	10,301,220	116,764	8.49%	\$12.64
	2016	11,394,625	137,399	10,421,425	120,206	8.54%	\$12.66

Alternative	Year	Total stock	New supply	Occupied stock	Net absorption	Vacancy rate	Average rent
	2011	10,858,192	178,266	9,925,837	234,258	8.59%	\$11.88
	2012	10,891,917	33,725	9,955,300	29,464	8.60%	\$12.18
	2013	10,901,054	9,137	9,964,223	8,922	8.59%	\$12.34
	2014	10,925,748	24,694	9,986,252	22,029	8.60%	\$12.41
	2015	10,957,143	31,396	10,012,110	25,858	8.62%	\$12.43
	2016	10,989,161	32,018	10,036,938	24,828	8.67%	\$12.41

Source: Everitt Real Estate Center, Moody's Economy.com, CoStar (all data in sq ft unless otherwise noted)

# Greeley Retail Forecast

Base Case Scenario

Year	Total stock	New supply	Occupied stock	Net absorption	Vacancy rate	Average rent
2011	9,675,766	492,049	8,686,850	434,942	10.22%	\$10.83
2012	9,770,007	94,241	8,847,604	160,754	9.44%	\$10.95
2013	9,906,632	136,625	9,047,245	199,641	8.67%	\$11.26
2014	10,051,350	144,718	9,247,902	200,657	7.99%	\$11.51
2015	10,204,331	152,981	9,443,411	195,510	7.46%	\$11.63
2016	10,362,695	158,363	9,629,637	186,225	7.07%	\$11.64

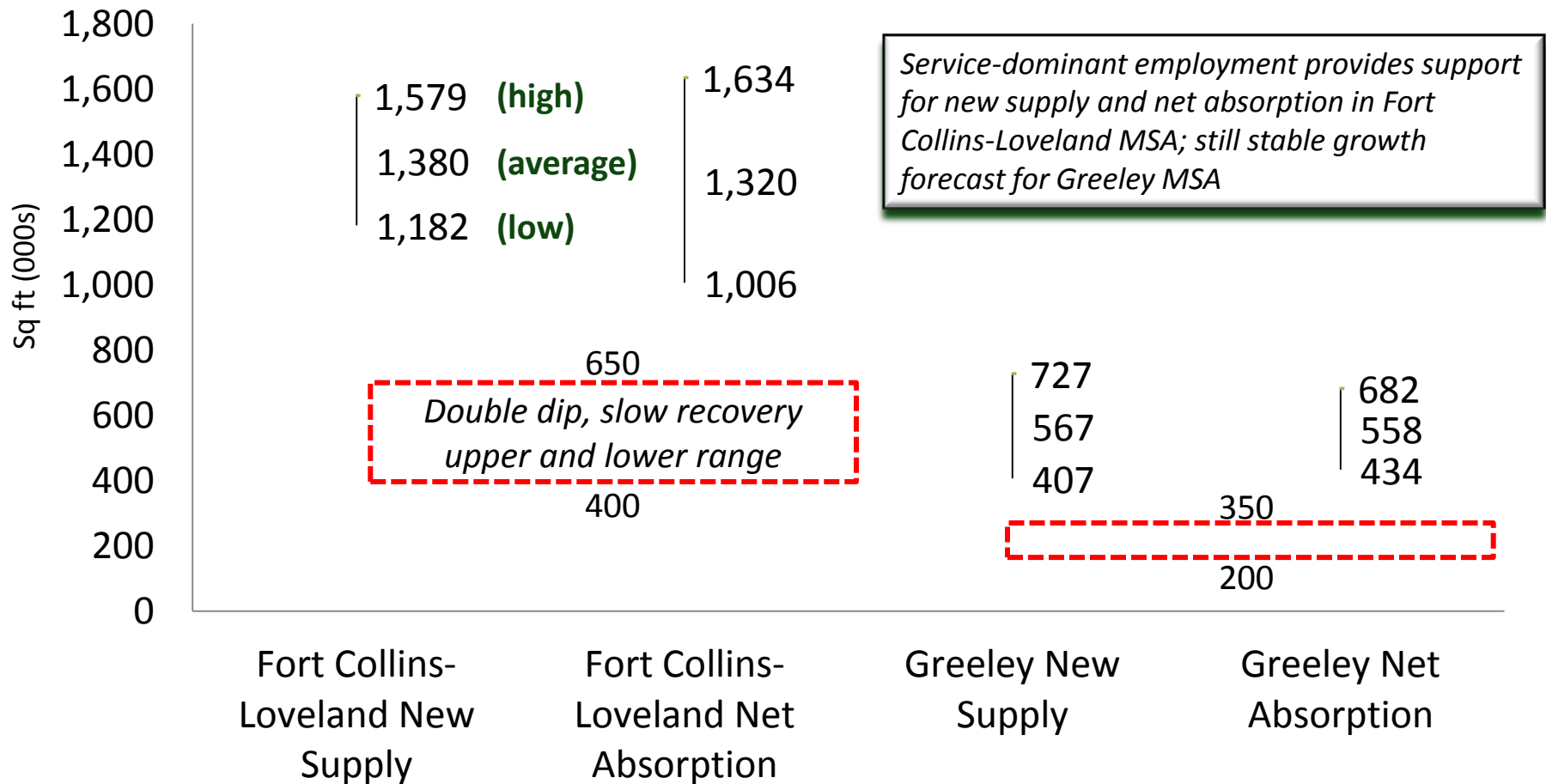
Alternative

Year	Total stock	New supply	Occupied stock	Net absorption	Vacancy rate	Average rent
2011	9,675,766	492,049	8,681,539	429,631	10.28%	\$10.77
2012	9,710,449	34,683	8,784,370	102,830	9.54%	\$10.59
2013	9,765,113	54,664	8,903,605	119,235	8.82%	\$10.58
2014	9,817,166	52,053	9,020,329	116,725	8.12%	\$10.60
2015	9,869,500	52,334	9,132,735	112,405	7.47%	\$10.63
2016	9,909,383	39,882	9,213,401	80,667	7.02%	\$10.63

Source: Everitt Real Estate Center, Moody's Economy.com, CoStar (all data in sq ft unless otherwise noted)

# Office forecast ranges, 2012 to 2016

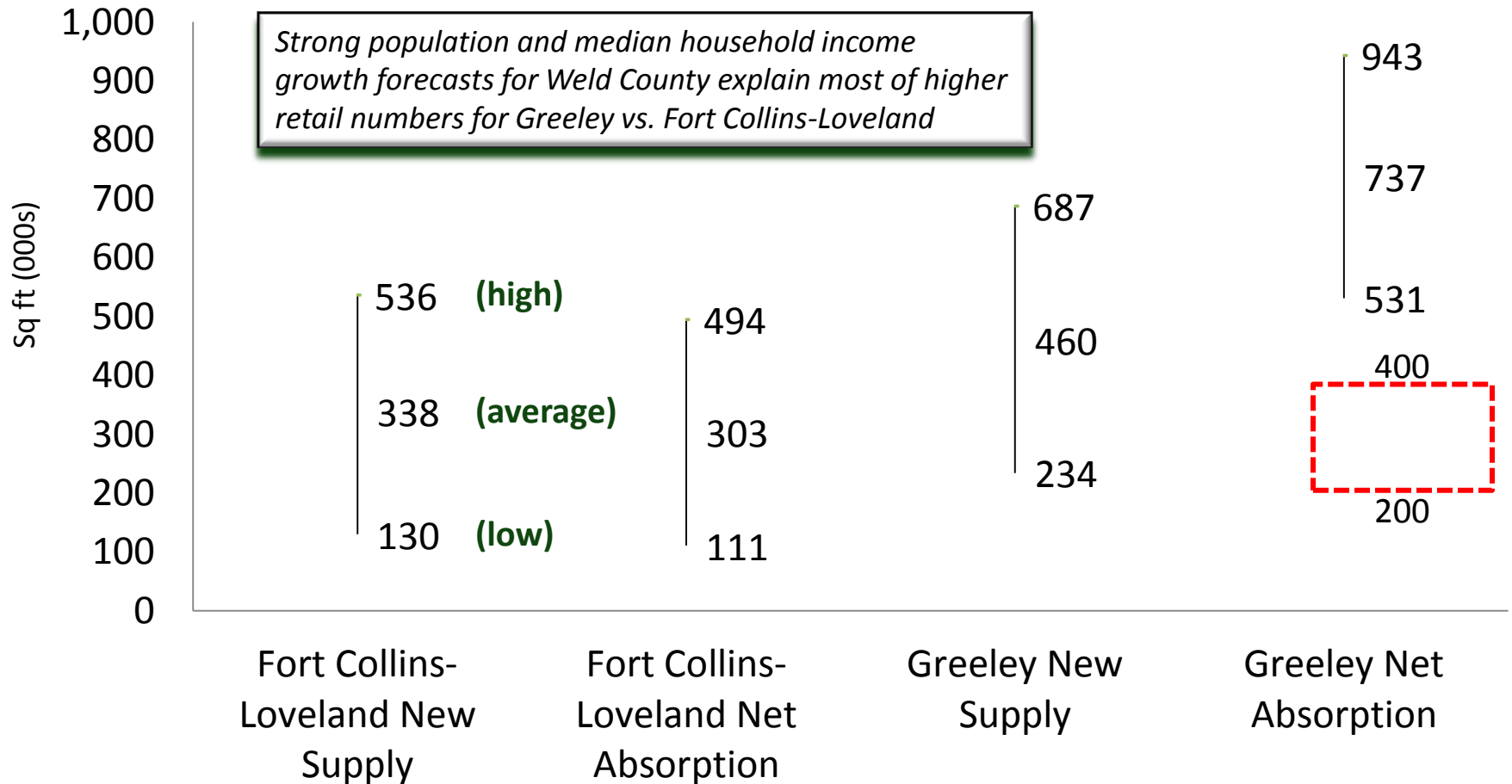
Low, High, and Average Cumulative New Supply and Net Absorption Forecast (000s sq ft)



Source: Everitt Real Estate Center

# Retail forecast ranges, 2012 to 2016

Low, High, and Average Cumulative New Supply and Net Absorption Forecast (000s sq ft)



Source: Everitt Real Estate Center

# What have we learned; what can we expect?

- Lessons from our past:
  - Our markets have experienced wild swings in economic and real estate cycles in the past (and likely will experience them in the future)
  - Some of the demand drivers of the past 20 to 30 years no longer exist; supply side
- Lessons from our future:
  - How and where the economy recovers matters most
  - The '*story*' of each new development through 2012 is critical
    - Why is any new development important, why does it exist, how does it meet existing or future needs
  - Empirical data and sustained demand matter
  - Submarkets are more important than markets
  - The ratio between rents and cost feasible rents will likely dampen oversupply risks

## History

The Everitt Real Estate Center was established in October 2000 with a grant from the Mortgage Bankers Association. In 2004, Eric Holsapple and Don Marostica alumni and owners of Loveland Commercial, LLC donated \$1.5 million to create the Loveland Commercial Endowed Chair in Real Estate. In August of 2005, Bob and Joyce Everitt and Everitt Companies pledged to donate \$2.4 million to support their goal to set the standard in teaching, research, service and extension for the benefit of Colorado. The Center is supported solely from membership fees, event profits and donations.

## Mission Statement

The mission of the Everitt Real Estate Center is to produce and disseminate knowledge, to provide applied research solutions that address current and future real estate related needs of Northern Colorado, the Front Range of Colorado, and the West. The Center also aims to equip Colorado State University students, Center members, and the local community-at-large by developing real estate educational programs that supplement standard academic and industry training initiatives. Furthermore, the Center will develop thought leadership research and actively participate in selective areas such as the role of real estate in global sustainability, multinational enterprises, and emerging markets.

## Today

- To support real estate research, including assisting in the dissemination of research results to academic and practitioner audiences.
- To seek funded research opportunities.
- To support a first-class real estate program.
- To support extra-curricular activities for our real estate students, real estate club, networking programs, off-campus education, including internships, executive shadowing, and jobs. Additionally, the Center will help support the Alpha Sigma Gamma Honors Society and an annual real estate career day.
- To provide educational programs for real estate industry professionals, focusing on practical issues that provide business solutions.

For more information and research reports, go to <http://www.realestate.colostate.edu>

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