



# Economic Stress Index™





# About LegalShield



**#1 Provider** of subscription-based legal plans to households



**1.8 million+ memberships** paying monthly via credit card/ debit card/payroll deduction



**46+** year history and counting



**47,000** small business accounts



**6,900 broker & agency clients** served by our dedicated B2B division



**39 law firms in 50 states, Canada and the United Kingdom** with a total of 900 lawyers, and a referral network of 4,600 lawyers, with average of 22 years experience



# About the LegalShield Economic Stress Index

- ✓ The LegalShield Economic Stress Index is a suite of leading indicators of the economic and financial status of U.S. households and small businesses.
- ✓ The LegalShield Economic Stress Index is comprised of five sub-indices that are constructed from LegalShield's proprietary data, which reflect the demand for various legal services over the past 15+ years. Each time a LegalShield provider law firm receives a request from a LegalShield customer, the request is logged as an "intake" in one of roughly 70 unique areas of law (e.g., real estate) depending on the nature of the request.
- ✓ Each sub-index reflects the number of intakes in an area of law as a share of total intakes across all areas of law in a given quarter. In some instances, individual indices across multiple areas of law (e.g., bankruptcy, foreclosure, consumer/finance) are combined to produce a composite index (e.g., consumer financial stress).
- ✓ The sub-indices that comprise the LegalShield Economic Stress Index were selected because they tend to lead an existing economic indicator that sheds light on the health of the U.S. economy (i.e., the target economic indicator). In this way, the LegalShield Economic Stress Index provides actionable intelligence about the direction of the U.S. economy in the near term.



# Advantages of the LegalShield Economic Stress Index



## UNIQUE

The LegalShield Economic Stress Index is based on inquiries into specific legal services each month. To the best of our knowledge, there is no comparable data on the market.



## PROPRIETARY

The LegalShield Economic Stress index is based on data collected through LegalShield's provider law firms in all 50 states, thereby offering information that is not accessible to the general public.



## HIGH-FREQUENCY

The LegalShield Economic Stress Index is based on data collected on a near real-time basis, and can be refreshed on a weekly, monthly, or quarterly basis depending on the user's needs.



## ROBUST

The LegalShield Economic Stress Index is based on intakes for more than 1.8 million memberships (including individuals and small businesses), providing a window into the experiences of families and businesses across the country at any given point in time.

# Interpreting Each Component of the LegalShield Economic Stress Index

## CONSUMER STRESS INDEX

Consumer spending accounts for more than two-thirds of U.S. economic activity. The flagship Consumer Stress Index tends to lead the Conference Board's Consumer Confidence Index by one to three months. The Consumer Stress Index also provides a useful "hard" data check on the Consumer Confidence Index and similar measures of consumer confidence that are based on "soft" survey data, as these measures are not always consistent with underlying economic conditions.

## BANKRUPTCY INDEX

Bankruptcy data provide an important insight into the overall financial health of consumers and businesses. As witnessed during the Great Recession of 2008-09, an uptick in bankruptcies can foreshadow significant turmoil within the economy. The Bankruptcy Index tends to lead the trajectory of total bankruptcies by roughly one month, providing an early warning signal of an economic downturn.

## FORECLOSURE INDEX

A rise in foreclosures often signals a worsening of household finances, as households typically delay payments on other debt obligations in order to pay their mortgages on time. The Foreclosure Index closely tracks foreclosures as reported each quarter by the Mortgage Bankers Association.

## HOUSING CONSTRUCTION INDEX

The housing market, broadly defined, accounts for up to one-seventh of U.S. economic activity, and the amount of new residential construction (as measured by housing starts) can provide insights into consumers' confidence about their jobs and future income. The Housing Activity Index tends to lead U.S. Census data on housing starts (a key economic indicator) by 1–2 months — providing timely intelligence about near-term housing market health.

## HOUSING SALES INDEX

The housing market accounts for a significant share of U.S. economic activity, and the pace of existing home sales can provide insights into consumers' confidence about their jobs and future income. The Housing Sales Index tends to lead existing home sales as published by the National Association of Realtors and offers an early look at emerging trends in the housing market.



# Consumer Stress Index

The LegalShield Consumer Stress Index fell to the lowest level on record in April. The latest round of federal relief should keep consumer stress muted in the near term.

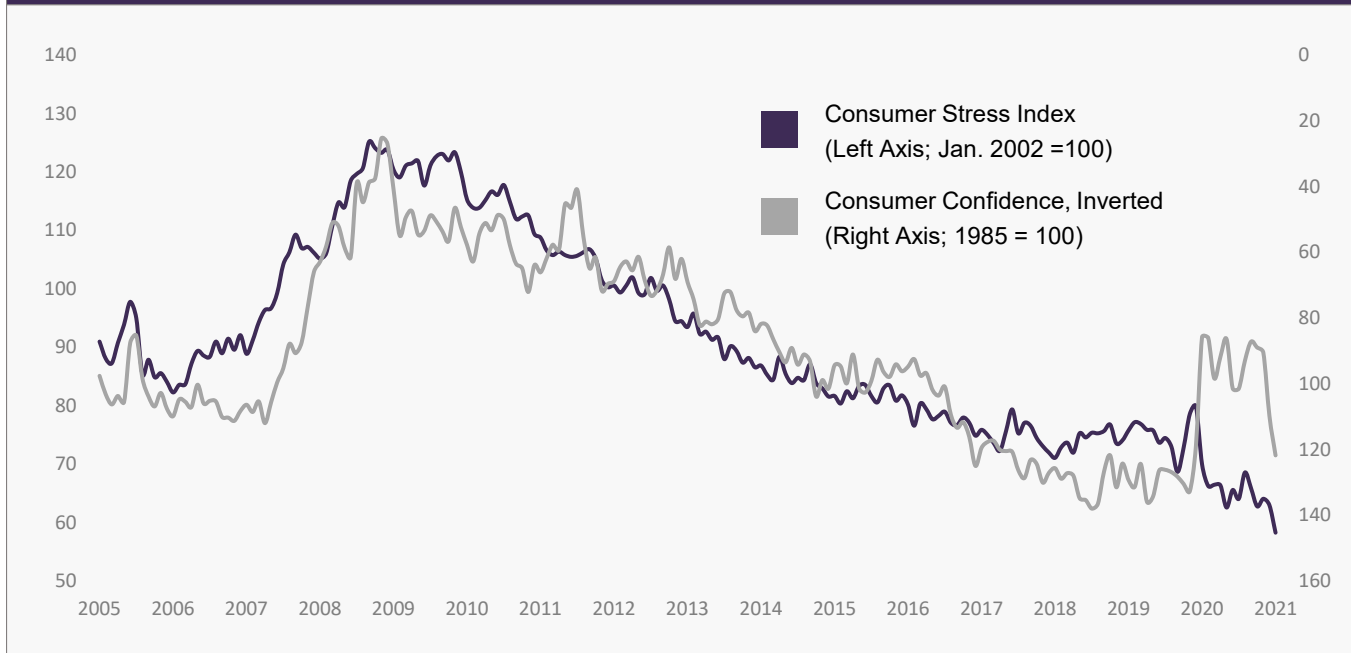
The LegalShield Consumer Stress Index eased (improved) 4.7 points in April to 58.3. Meanwhile, the Conference Board's Consumer Confidence Index surged by 12.0 points to 121.7 in April, the highest level in fourteen months.

The American Rescue Plan, warming weather, and rebounding economic activity have played significant roles in keeping consumer stress low. For example, research from bill pay service [Doxo](#) reveals that the number of payments made towards household bills during the third week of March increased 30% M/M — almost perfectly coinciding with the timing of stimulus payments reaching consumer bank accounts. Meanwhile, rising vaccination rates, easing mobility restrictions, and falling infection rates have led to increased discretionary spending: retail sales rose by nearly 10% in March as consumers spent more on sporting goods, clothing, and food services.

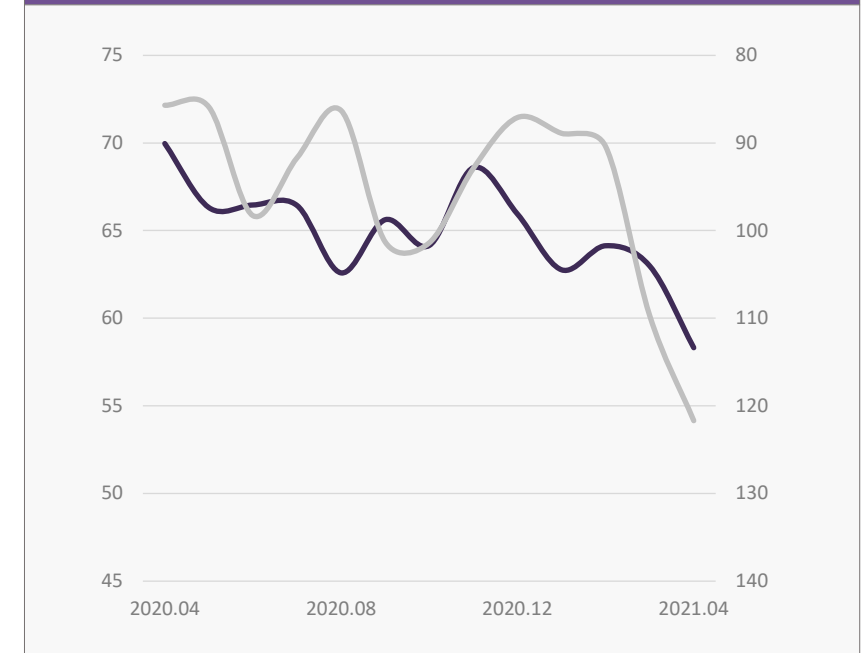
Though the labor market has made strides as a result of improved economic activity, the recovery seems to have hit a speed bump recently: just 266,000 non-farm jobs were added in April, far below consensus estimates of one million job gains. BLS data show that employment in the leisure and hospitality sector jumped by 331,000, a welcome improvement given how negatively that sector was impacted by the pandemic, but still far below expectations. Many businesses — particularly in the services sector — are reporting difficulty filling open positions, which likely contributed to April's weak employment report. This difficulty likely stems from a combination of lingering health concerns, career changes, expanded jobless benefits, and the need to care for family members. It remains to be seen how the labor market recovery will evolve once the pandemic winds down and federal relief measures expire, but U.S. employers are shifting into hiring mode, which is a positive development for consumers and should help to keep financial stress low in the coming months.

# Consumer Stress Index

## Historical Trend Over Past 16 Years



## Movement Over Past 12 Months





# Bankruptcy Index

The LegalShield Bankruptcy Index fell in April to the second lowest point recorded. Federal protection measures are likely to keep bankruptcies low in the near term, though filings may rise once provisions end.

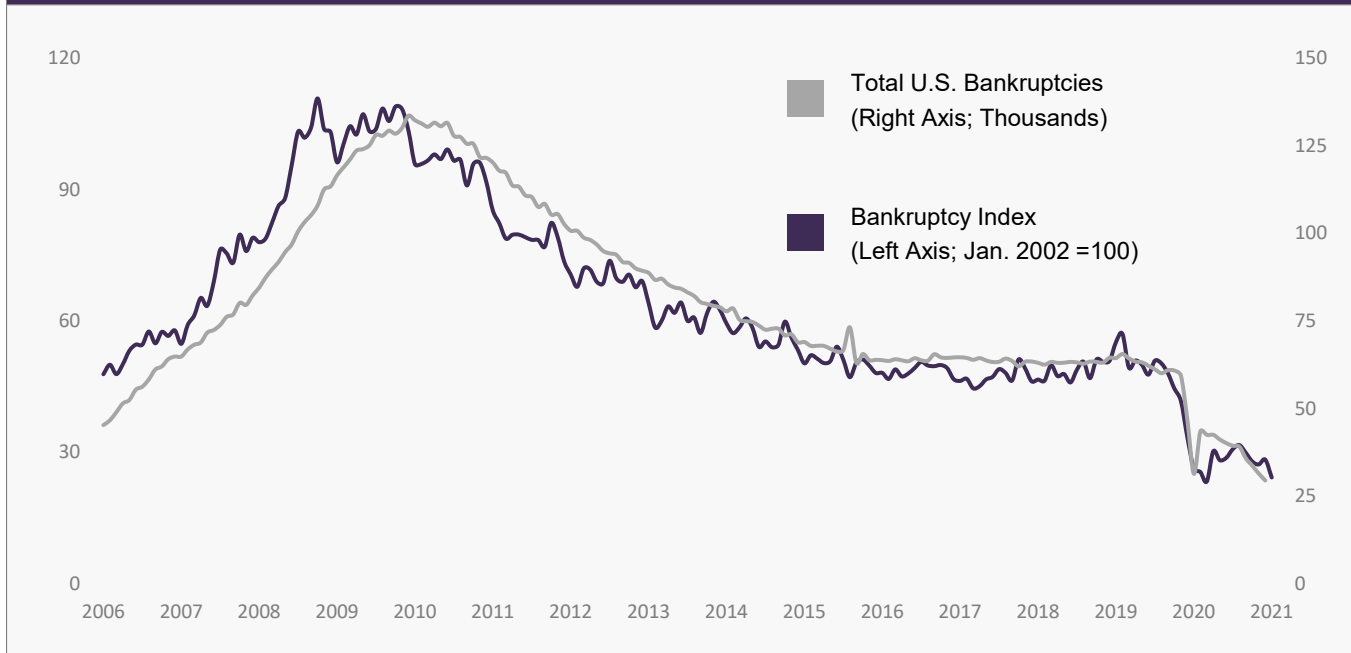
The LegalShield Bankruptcy Index decreased (improved) 4.1 points to 24.3 in April. **Meanwhile, the Administrative Office of the U.S. Courts reports that [bankruptcy filings](#) fell 38% in the 12-month period ending on March 31.** Another round of direct payments, extended unemployment benefits, and a recapitalized Paycheck Protection Program have all helped keep bankruptcies muted. Meanwhile, several trends suggest consumers are beginning to return to pre-pandemic consumption patterns. For instance, [data](#) from Visa and Mastercard show that in-store credit card spending is beginning to rebound, while Federal Reserve data show that outstanding credit card debt ticked up in March, the first monthly increase in a year. Given the sizeable increase in disposable income following the \$1.9 trillion American Rescue Plan, most consumers appear to be well-positioned to manage financial obligations even as spending levels rise.

However, while the overall consumer outlook is clearly improving, a significant minority of consumers remain under financial duress and are using credit cards or personal loans to meet expenses. For example, nearly 30% of Americans that are denied [unemployment benefits](#) turn to credit card or personal loans to make payments. Further, for consumers who remain jobless due to the pandemic, family care responsibilities, or other reasons, bankruptcies could spike later this year if consumer protections expire before they re-enter the labor force and find employment. Another wildcard to monitor is a recent ruling that overturned the CDC's national eviction ban, which could impact the estimated [eight million households](#) that are behind on rent payments.

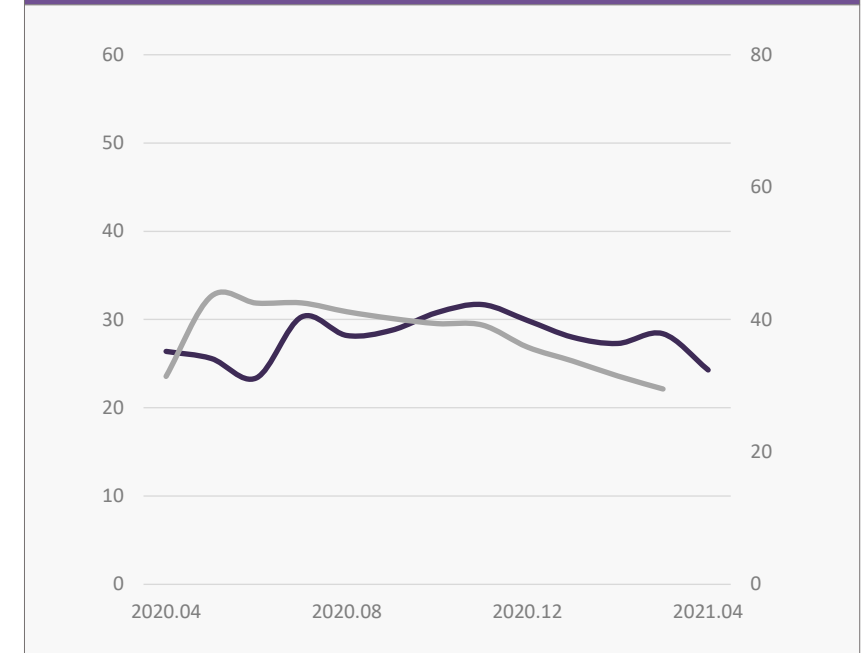
In the near-term however, LegalShield data indicates that bankruptcies should remain low.

# Bankruptcy Index

## Historical Trend Over Past 16 Years



## Movement Over Past 12 Months





**FORECLOSURE**

**FOR  
SALE**

# Foreclosure Index

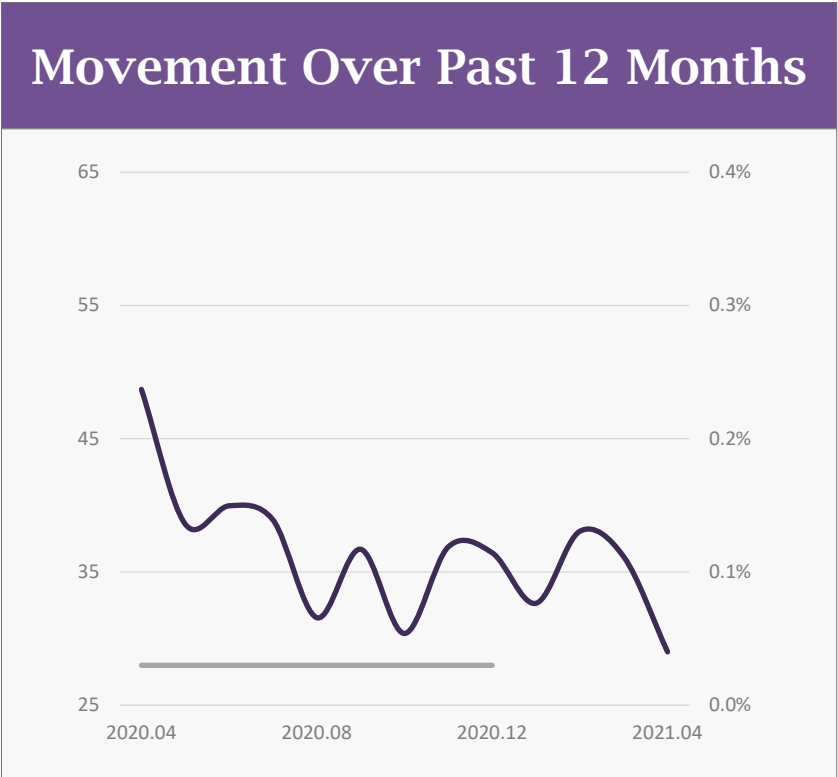
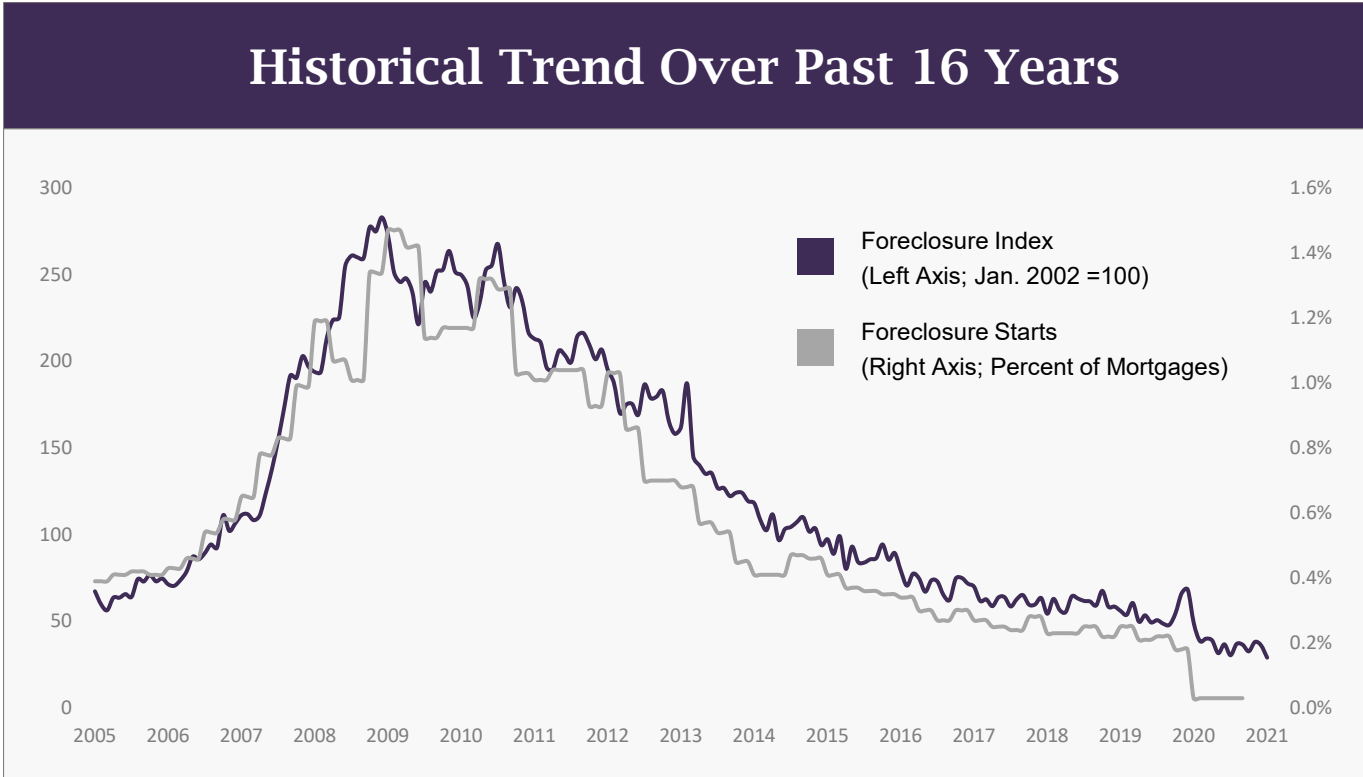
The LegalShield Foreclosure Index fell in April to the lowest reading since the series began in 2002. Foreclosures should remain muted in the coming months while the federal foreclosure moratorium is in place.

The LegalShield Foreclosure Index decreased (improved) 7.1 points to 29.0 in April. Meanwhile, [Attom](#) reports that 11,880 properties had foreclosure filings in March, up 5% from February (the second consecutive monthly increase) but down 75% Y/Y. Overall, foreclosure filings were 9% higher in 2021 Q1 than in Q4. According to the [Mortgage Bankers Association](#), the share of loans in forbearance fell for the eighth straight week to 4.5% as of mid-April (for comparison, the share of loans in forbearance peaked around 10% in June). Additionally, a recent [survey](#) found that consumers prioritized their mortgage payments over auto and credit card loans over the past year (despite the foreclosure moratorium), possibly to protect increasing home equity.

At the same time, some consumers are facing greater difficulty making up missed payments and navigating the forbearance process. As of mid-April, 11% of Black homeowners were in forbearance, more than double the overall rate, per [federal research](#). Further, the [Consumer Financial Protection Bureau](#) reports that in March, mortgage-related consumer complaints reached their highest volume in nearly three years.

Overall, the LegalShield Foreclosure Index indicates that foreclosures will remain low in the coming months, especially while the federal foreclosure moratorium — set to expire at the end of June — remains in place.

# Foreclosure Index





# Housing Construction Index

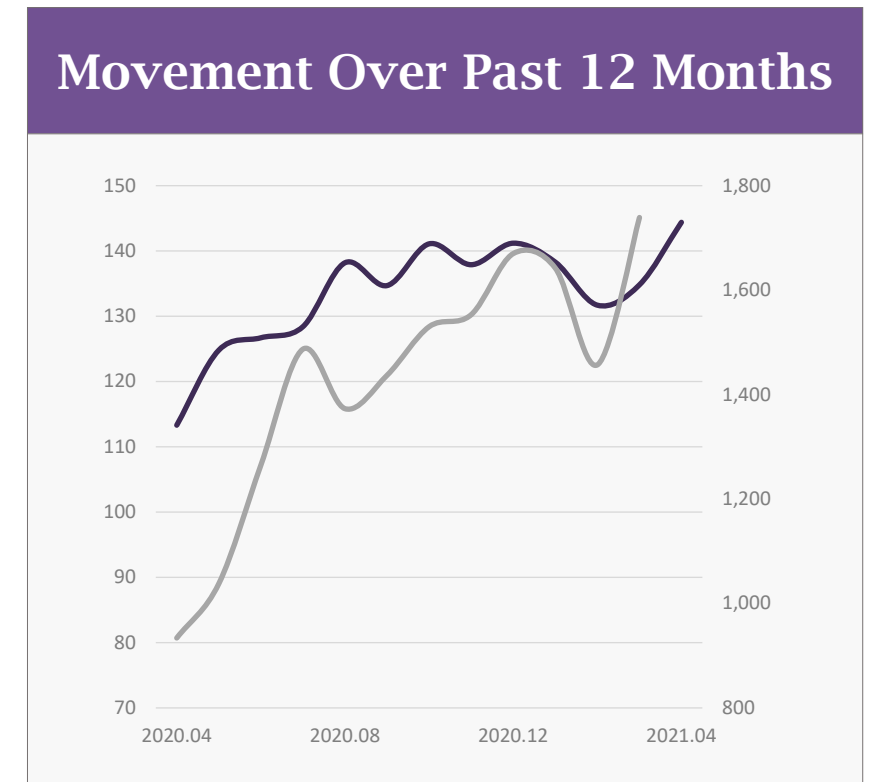
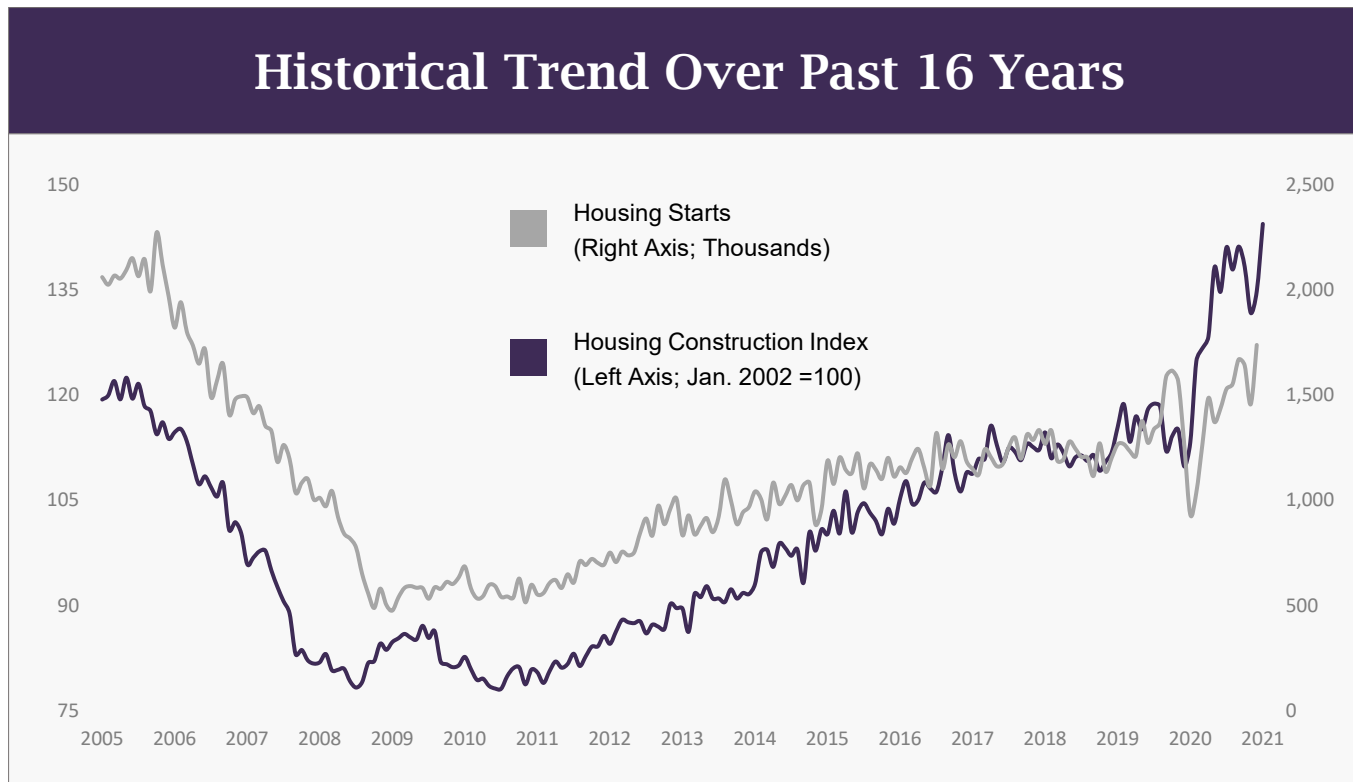
The LegalShield Housing Construction Index increased in April to the highest level in the series' history. Housing construction is expected to remain strong in the near term due to high demand and low inventory levels, though sharp increases in input costs and concerns about labor shortages are key headwinds.

The LegalShield Housing Construction Index jumped from 134.8 to 144.4 in April. Meanwhile, housing starts improved 19% in March and were up 37% from a year ago. Though the NAHB/Wells Fargo Housing Market Index improved by one point and remains well above pre-pandemic levels, there are significant cost pressures facing the homebuilding industry. For example, [lumber prices](#) are 240% higher than a year ago, adding nearly \$36,000 to the price of an average home. Further, the [Home Builders Institute](#) reports that residential builders are facing widespread shortages of skilled workers: as of January 2021, the industry faces a shortfall of more than 300,000 workers.

Despite these intense cost pressures, strong housing demand is propelling builder confidence and construction spending. Per Freddie Mac, the housing market is [3.8 million](#) single-family homes short of meeting demand. New home construction is showing potential to offset some of this supply/demand imbalance, as sales of newly constructed homes jumped by 21% in March compared with February. Further, Census Bureau data show that residential construction spending increased 23% Y/Y and single-family construction spending increased 27% Y/Y in March.

In short, robust demand and supply shortages are likely to keep housing construction strong in the near term.

# Housing Construction Index





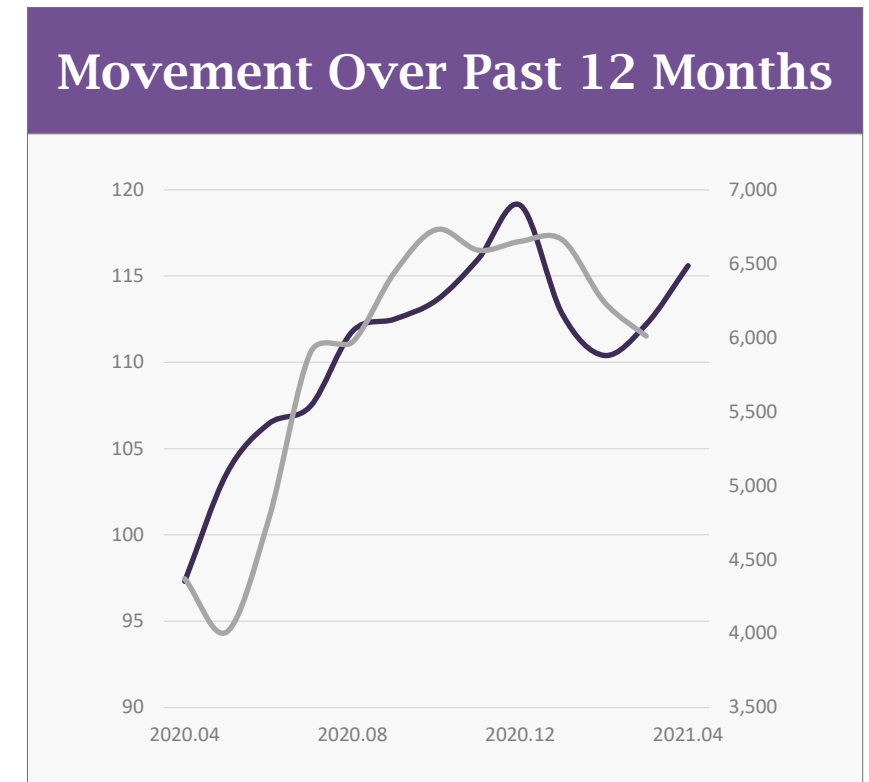
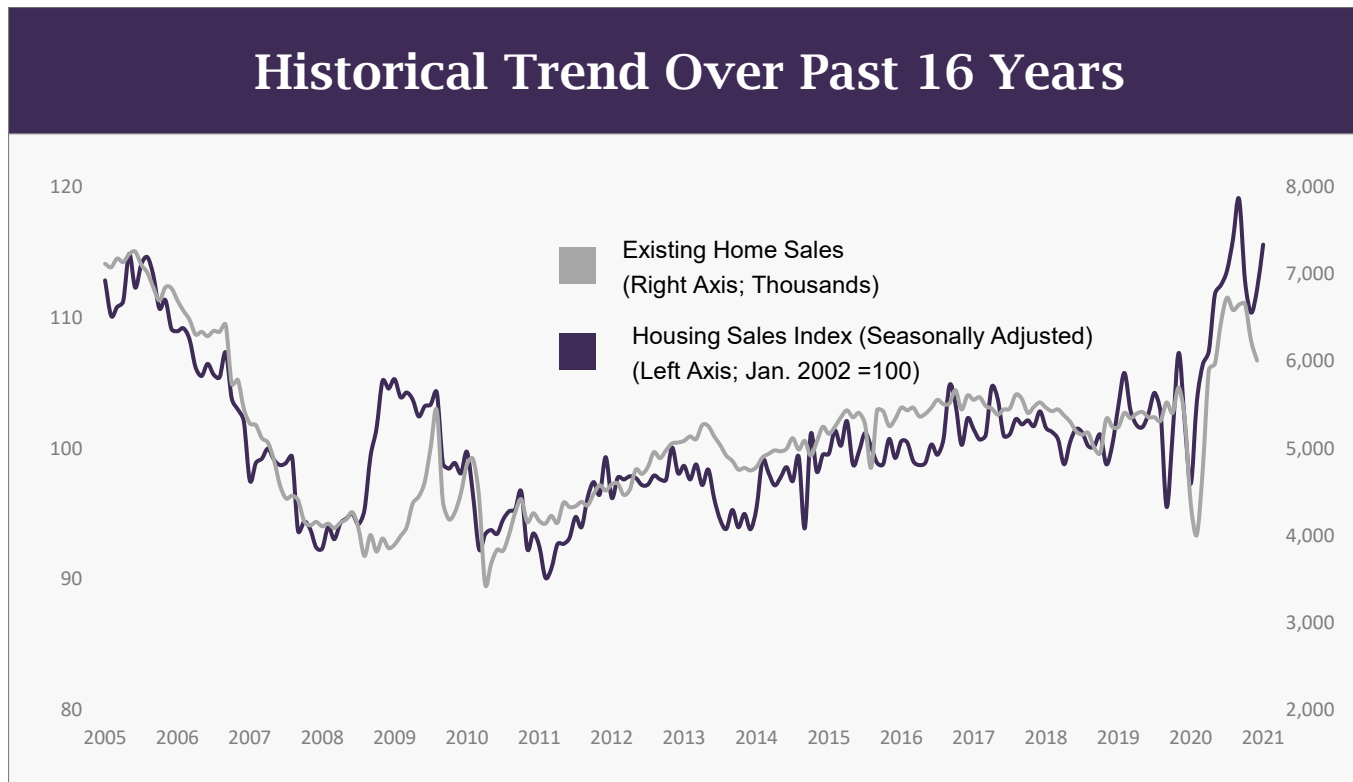
# Housing Sales Index

The LegalShield Housing Sales Index rose in April to the third highest level on record. Existing home sales should remain healthy over the next three to six months, though affordability constraints are likely to grow.

The LegalShield Housing Sales Index increased 3.4 points in April to 115.6. Meanwhile, existing home sales declined 3.7% M/M in March but were up 12.3% compared to a year ago. Low mortgage rates, increased savings among employed workers, and shifting preferences towards single-family homes continue to drive existing home sales. For example, the [30-year fixed-rate mortgage](#) fell from 3.18% in the beginning of April to 2.98% by month-end. Favorable interest rates have improved perceptions of affordability amongst some homeowners: per the [Housing Trends Report](#), 35% of buyers said they could afford half or more of the homes for sale in their market in 2021 Q1, 12 percentage points higher than a year ago. However, low rates and low inventories are placing upward pressure on home prices: according to a study by [GOBankingRates](#), the median home price increased from \$330,500 in January to \$338,800 in March. At the current pace, median prices would reach \$379,100 by the end of the year. For that reason, homes are selling at [breakneck speed](#): homes spent an average of 43 days on the market in April, 18 days fewer than the average from April 2017 to 2019 and faster than any sales pace since 2012. Rising prices may lead to affordability constraints, particularly among first-time home buyers. The [National Association of Realtors](#) reports that in February, the number of homes sold under the \$100K price range dropped by 26% Y/Y and homes in the \$100K-\$250K range fell by 11% Y/Y. Meanwhile, homes sold for more than \$1 million now represent 6% of all sales, double the pre-pandemic share.

Despite headwinds at the lower end of the market, positive credit conditions and pandemic-induced demand shifts suggest that housing sales should stay strong in the coming months, an outlook supported by the LegalShield Housing Sales Index.

# Housing Sales Index



# Technical Appendix



# Key Findings

Three individual AOLs demonstrated strong correlation and leading properties against five target macroeconomic indicators.

Summary Of Results							
LEGALSHIELD AREA OF LAW	TARGET MACRO INDICATOR(S)	CORRELATION (LEVEL)	CORRELATION (Y/Y)	CORRELATION (Q/Q)	TRACKS HISTORICAL TREND?	ESTIMATED LEAD	ROBUST OVER TIME?
Bankruptcy	Bankruptcies	0.75	0.74	0.22	✓	≈ 1 mo.	✓+
Foreclosure	Foreclosures	0.96	0.88	0.47	✓	Coincident*	✓+
Real Estate	Existing Home Sales	0.87	0.65	0.46	✓	≈ 0-1 mo.*	✓

\*These indices have a timing advantage over their target indicators due to the release schedule of the target series.

# Composite Indices

We developed two composite indexes that are strongly correlated with and tend to lead economic indicators of interest.



LegalShield “Consumer Stress” Index

- ✓ **Component AOLs:** (1) Bankruptcy; (2) Consumer/Finance; (3) Foreclosure
- ✓ **Target Indicator:** Consumer Confidence
- ✓ **Performance:** -0.85 Correlation; 1-3 Month Lead



LegalShield “Housing Construction” Index

- ✓ **Component AOLs:** (1) Real Estate; (2) Foreclosure
- ✓ **Target Indicator:** Housing Starts
- ✓ **Performance:** 0.91 Correlation; 0-2 Month Lead\*

\*In addition to its statistical lead time, the Index also has a timing advantage over housing starts of roughly one week due to release schedules.

# Methodology:

## Individual Index Development



# Methodology

A six-step process was used to convert LegalShield intake data into potential indices.

1

## **CONSTRUCT DATASET:**

Conduct preliminary data cleaning, processing, and formatting.

2

## **DETERMINE SCOPE OF ANALYSIS:**

Examine differences across plan types and subscriber samples to determine the optimal “subscriber universe” for index development.

3

## **DEFINE INTAKE METRIC:**

Test competing approaches for normalizing intake data.

4

## **FILTER AOLS:**

Evaluate and scope the original list of 65 areas of law (AOLs) to identify the best candidates for index development.

5

## **TEST:**

Run the scoped AOLs through a series of transformations and statistical tests to identify quantitative relationships with key macroeconomic indicators.

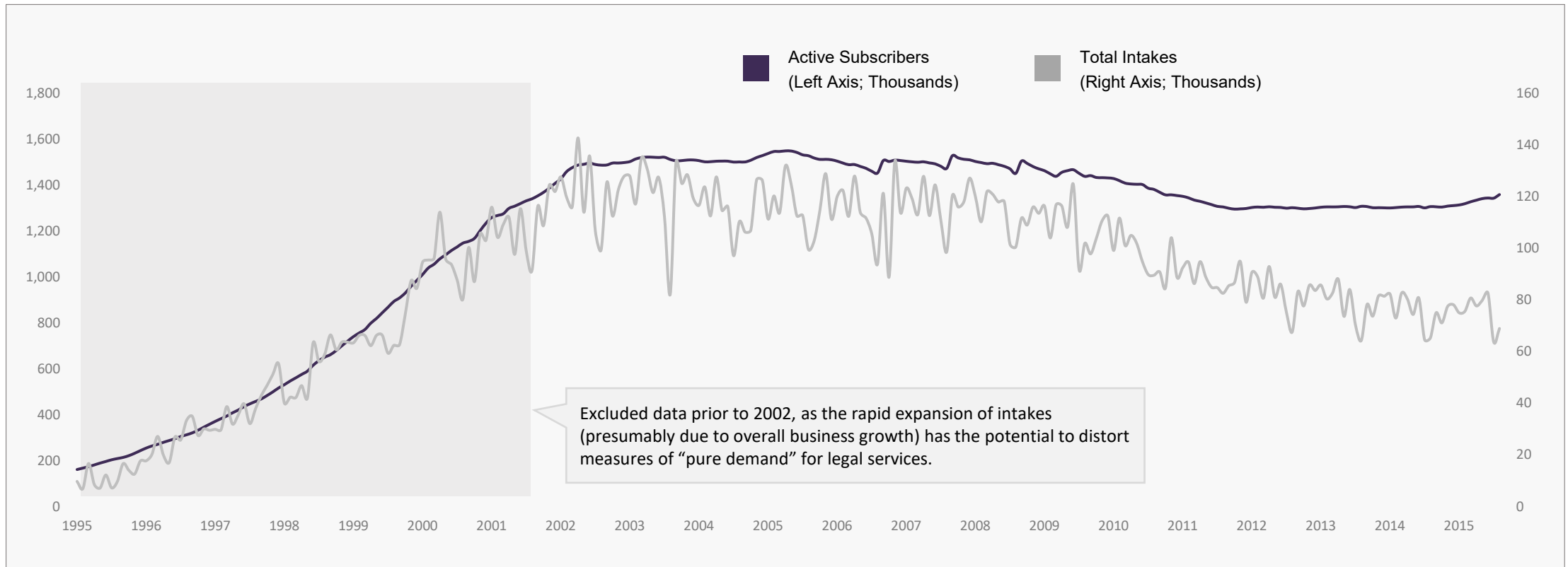
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## **DEVELOP INDEXES:**

Combine specific AOLs into composite indexes and test relationships with key macroeconomic indicators.

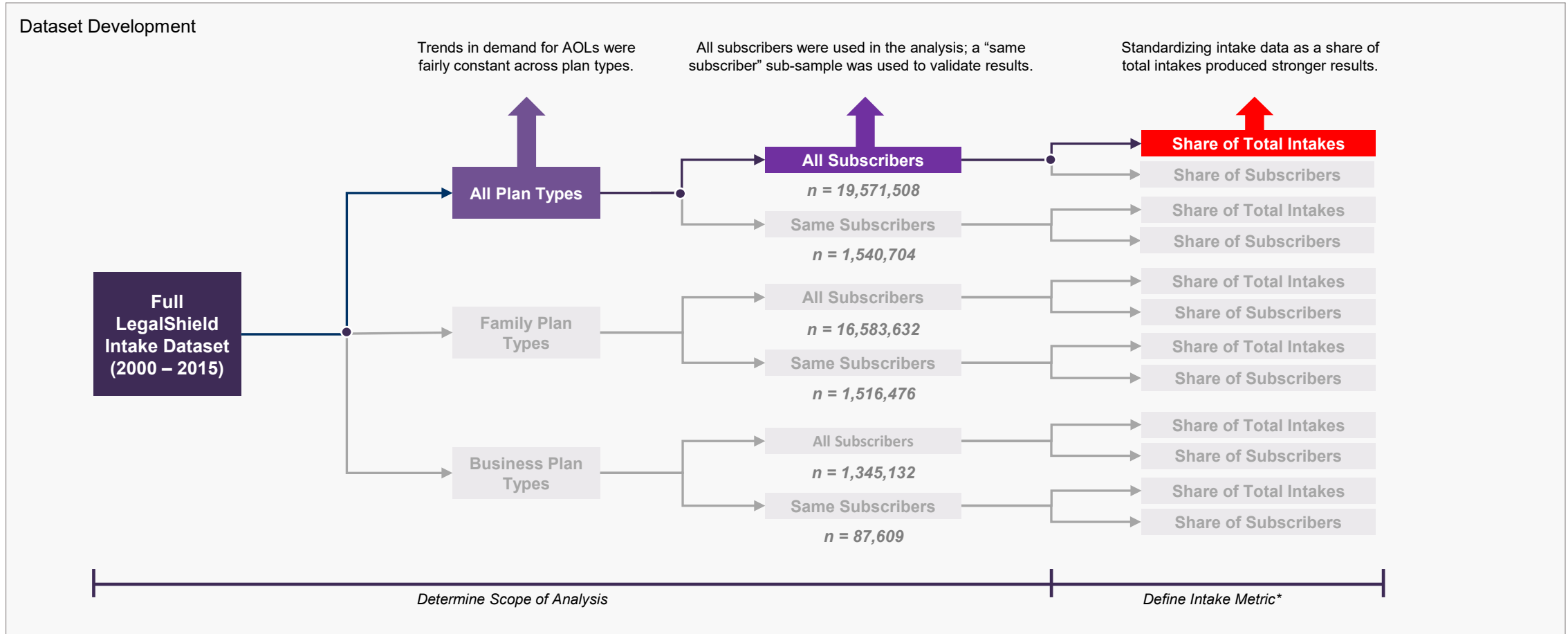
# Data Construction & Cleaning

Monthly subscriber and intake data was trimmed to improve the stability of the dataset over time.



# Analytical Scope

Testing and index development used intake data from all subscribers across all plan types, standardized by total intakes.



\*Standardizing intake data as a share of active subscribers controls for the change in the size of the subscriber base over time. Standardizing intake data as a share of total intakes controls for shifts in the relative demand for different AOLs over time.

# Filter AOLs

Out of 65 AOLs in the original intake data, a three-step filtering process identified 27 as suitable candidates for index development.

## Scoping Intake Data

1

### ORIGINAL DATASET:

Historical intake data from LegalShield included 65 AOLs.



2

### CONSOLIDATE AOLs:

Consolidating “like” AOLs reduced the number from 65 to 49.



3

### CRITERIA 1: HISTORICAL DATA

18 AOLs lacked sufficient historical data.



4

### CRITERIA 2: NARROW SCOPE

4 AOLs were defined too broadly to support a specific index narrative, leaving 27 “qualifying” AOLs.



# Filter AOL

Detailed Inclusion Filter Results (1/2)

ID	LEGALSHIELD AREA OF LAW	ASSOCIATED WITH +/- LIFE EVENT	HISTORICAL DATA	NARROW SCOPE	INCLUDE IN DATASET
1	Administrative Law	Ambiguous		✓	
2	Automobile Accident	-	✓	✓	✓
3	Banking	Ambiguous	✓		
4	Bankruptcy	-	✓	✓	✓
5	Business License, Fees, etc.	Ambiguous	✓	✓	✓
6	Civil Litigation	-	✓	✓	✓
7	Collection	-	✓	✓	✓
8	Consumer/Finance	Ambiguous	✓	✓	✓
9	Contract	Ambiguous	✓	✓	✓
10	Corporate	+	✓	✓	✓
11	Criminal	-	✓	✓	✓
12	Divorce	-		✓	
13	Divorce Uncontested	-		✓	
14	Education	-	✓	✓	✓
15	Elder Law	-	✓	✓	✓
16	Employment	Ambiguous	✓	✓	✓
17	Entertainment	Ambiguous		✓	
18	Estate Planning	Ambiguous	✓	✓	✓
19	Family Law	Ambiguous	✓	✓	✓
20	Firearm	Ambiguous		✓	
21	Foreclosure	-	✓	✓	✓
22	Franchise Law	Ambiguous		✓	
23	General Law	Ambiguous	✓		
24	Identity Theft	-		✓	
25	Immigration	Ambiguous	✓	✓	✓

# Filter AOL

Detailed Inclusion Filter Results (2/2)

ID	LEGALSHIELD AREA OF LAW	ASSOCIATED WITH +/- LIFE EVENT	HISTORICAL DATA	NARROW SCOPE	INCLUDE IN DATASET
26	Insurance	-	✓	✓	✓
27	Labor Law	-		✓	
28	Landlord Tenant	-	✓	✓	✓
29	Legal Malpractice	-		✓	
30	Loan Modification	Ambiguous		✓	
31	Medical Malpractice	-	✓	✓	✓
32	Military Law/Security Clearance	Ambiguous		✓	
33	Other	Ambiguous	✓		
34	Patents Combined	+	✓	✓	✓
35	Personal Injury	-	✓	✓	✓
36	Probate	-	✓	✓	✓
37	Product Liability	-		✓	
38	Public Service	Ambiguous		✓	
39	Real Estate	+	✓	✓	✓
40	Request for Service	Ambiguous			
41	Small Claims	-	✓	✓	✓
42	Social Security	-	✓	✓	✓
43	Tax	Ambiguous	✓		
44	Trademarks	+		✓	
45	Traffic	-	✓	✓	✓
46	Veteran's Affairs	Ambiguous		✓	
47	Will Workshop	Ambiguous		✓	
48	Workman's Compensation	-	✓	✓	✓
49	Wrongful Death	-		✓	
<b>TOTAL</b>			<b>31</b>	<b>44</b>	<b>27</b>

# Testing

Intake data from the 27 “qualifying” AOLs was then tested against 15 economic indicators of interest to assess potential predictive value.

## **MACROECONOMIC INDICATORS:**

1. Conduct preliminary data cleaning, processing, and formatting.
2. Examine differences across plan types and subscriber samples to determine the optimal “subscriber universe” for index development
3. Test competing approaches for normalizing intake data.

## **HOUSING INDICATORS:**

4. Housing Starts
5. Existing Home Sales (NAR)
6. Residential Construction Permits
7. Small Business Optimism Index (NFIB)

## **FINANCIAL HEALTH INDICATORS:**

8. Total Bankruptcies (Total Filings; Epiq)
9. Delinquencies (All Loans & Leases; St. Louis Fed)
10. Foreclosures (All Mortgage Foreclosures Started; Mortgage Bankers Association)
11. Consumer Credit (Total; Revolving; Non-Revolving)
12. S&P 500 Index
13. Wilshire 5000 Index






## **CONFIDENCE INDICATORS:**

14. Consumer Confidence Index (Conference Board)
15. Small Business Optimism Index (NFIB)

# Testing

Three out of the final 27 AOLs demonstrated a strong statistical relationship to a handful of economic indicators.

## Scoping Intake Data

- 1** **27 SCOPED AOLS:** 27 AOLs were subjected to several rounds of statistical testing. 
- 2** **STATISTICAL RELATIONSHIP:** Test for correlation across various transformations. 
- 3** **TRACKING HISTORICAL TREND:** Visually assess AOL to determine how closely it tracks its target indicator. 
- 4** **LEADING PROPERTIES:** Test for leading / concurrent properties. 
- 5** **ROBUST ACROSS TIME:** Confirm that relationships hold across various out-of-sample time periods. 

# Testing

Testing included computing various correlations, assessing historical trends and leading properties, and evaluating stability over time.

1

## BASIC COORELATIONS:

- Examined the correlation between AOL and target macro indicator using different transformations



2

## HISTORICAL TREND & LEADING PROPERTIES:

- Produced charts of transformed AOL and select economic indicators to confirm/reject if AOL tracks indicator's historical trend
- Examined AOLs on both a concurrent and leading basis

3

## STABILITY TESTS:

- Performed testing to confirm that relationship between AOL and macro indicator was not driven solely by a specific time period within the dataset and ensure that the relationship holds across time
- Test 1: Compared correlations between first half of data (2000 – 2007) and second half of data (2008 – 2015)
- Test 2: Compared correlations between random samples of the data
- Test 3: Compared earliest and latest data (2000 – 2005, 2010 – 2015) with middle of data (2006 – 2009)
- Test 4: Compared correlations between 20% of most recent data (Nov 2012 – Dec 2015) and remaining data

# Testing

Statistical Relationship Testing, Select Results

Correlation Results (2002 – 2017)				
LEGALSHIELD AREA OF LAW	TARGET INDICATOR	CORRELATION (LEVEL)	CORRELATION (Y/Y)	CORRELATION (Q/Q)
Bankruptcy	Bankruptcies	0.76	0.67	0.20
Foreclosure	Foreclosures	0.96	0.87	0.49
Real Estate	Existing Home Sales	0.85	0.58	0.36

# Testing

Historical Trend & Leading Properties Testing, Select Results

Historical Trend & Leading Properties Results (2002 – 2016)				
LEGALSHIELD AREA OF LAW	TARGET INDICATOR	TRACKS HISTORICAL TREND?	LEADING PROPERTIES	APPROXIMATE LEAD TIME
Bankruptcy	Bankruptcies	✓	✓	≈ 1 mo.
Foreclosure	Foreclosures	✓	r	Coincident*
Real Estate	Existing Home Sales	✓	✓	≈ 1 mo.*

\* These indices have a practice lead time of varying length due to the release schedule of the target series.

# Testing

Intertemporal Stability Testing, Select Results

Stability Test Results (2000 – 2015)							
LEGALSHIELD AREA OF LAW	TARGET MACRO INDICATOR(S)	TEST 1*	TEST 2*	TEST 3*	TEST 4*	OVERALL SCORE	KEY TAKEAWAYS
Bankruptcy	Bankruptcies	✓	✓	✓	✓	✓+	Performed well across all tests
Foreclosure	Foreclosures	✓	✓	✓	✓	✓+	Performed well across all tests
Real Estate	Existing Home Sales	r	✓	✓	✓	✓	Performed well on all but one test

\* Test 1: Compared correlations between first half of data (2000 – 2007) and second half of data (2008 – 2015)

\* Test 2: Compared correlations between random samples of the data

\* Test 3: Compared earliest and latest data (2000 – 2005, 2010 – 2015) with middle of data (2006 – 2009)

\* Test 4: Compared correlations between 20% of most recent data (Nov 2012 – Dec 2015) and remaining data

# Methodology:

## Composite Index Development



# Methodology

A five-step process was used to convert LegalShield data into composite indices.

- 1 SELECT AOLS:** Select individual AOLS to be included in the composite index, based on results of statistical tests and desired index “narrative” (e.g., consumer stress).
- 2 TRANSFORM AOLS:** Compute the month-on-month percent change for each AOL.
- 3 STANDARDIZE:** Create a standardization factor for each AOL, based on its standard deviation. Multiply each transformed AOL by the standardization factor to produce an “adjusted monthly contribution” for each AOL.
- 4 SUM COMPONENTS:** Sum the adjusted monthly contribution across each AOL to produce a monthly index growth rate.
- 5 REBASE TO 100:** Rebase the monthly index growth rate to a given month (January 2000 = 100) and to produce a monthly composite index.

# Testing

## Historical Trend & Leading Properties Test Results

Historical Trend & Leading Properties Results (2002 – 2016)				
COMPOSITE INDEX	TARGET INDICATOR	TRACKS HISTORICAL TREND?	LEADING PROPERTIES	APPROXIMATE LEAD TIME
Consumer Stress	Consumer Confidence	✓	✓	1 - 3 mo.
Housing Construction	Housing Starts	✓	✓	0 – 2 mo.*

\*In addition to its statistical lead time, the Index also has a timing advantage over housing starts of roughly a week due to release schedules.

# Testing

## Statistical Relationship Test Results

Correlation Results (2002 – 2017)				
COMPOSITE INDEX	TARGET INDICATOR	CORRELATION (INDEX)	CORRELATION (Y/Y)	CORRELATION (Q/Q)
Consumer Stress	Consumer Confidence	-0.85	-0.58	-0.33
Housing Construction	Housing Starts	0.88	0.55	0.23

# Testing

## Intertemporal Stability Tests

Stability Test Results (2000 – 2015)							
COMPOSITE INDEX	TARGET INDICATOR	TEST 1*	TEST 2*	TEST 3*	TEST 4*	OVERALL SCORE	KEY TAKEAWAYS
Consumer Stress	Consumer Confidence	r	✓	✓	✓	✓	Performed well on all but one test
Housing Construction	Housing Starts	r	✓	✓	✓	✓	Performed well on all but one test

Test 1: Compared correlations between first half of data (2000 – 2007) and second half of data (2008 – 2015)

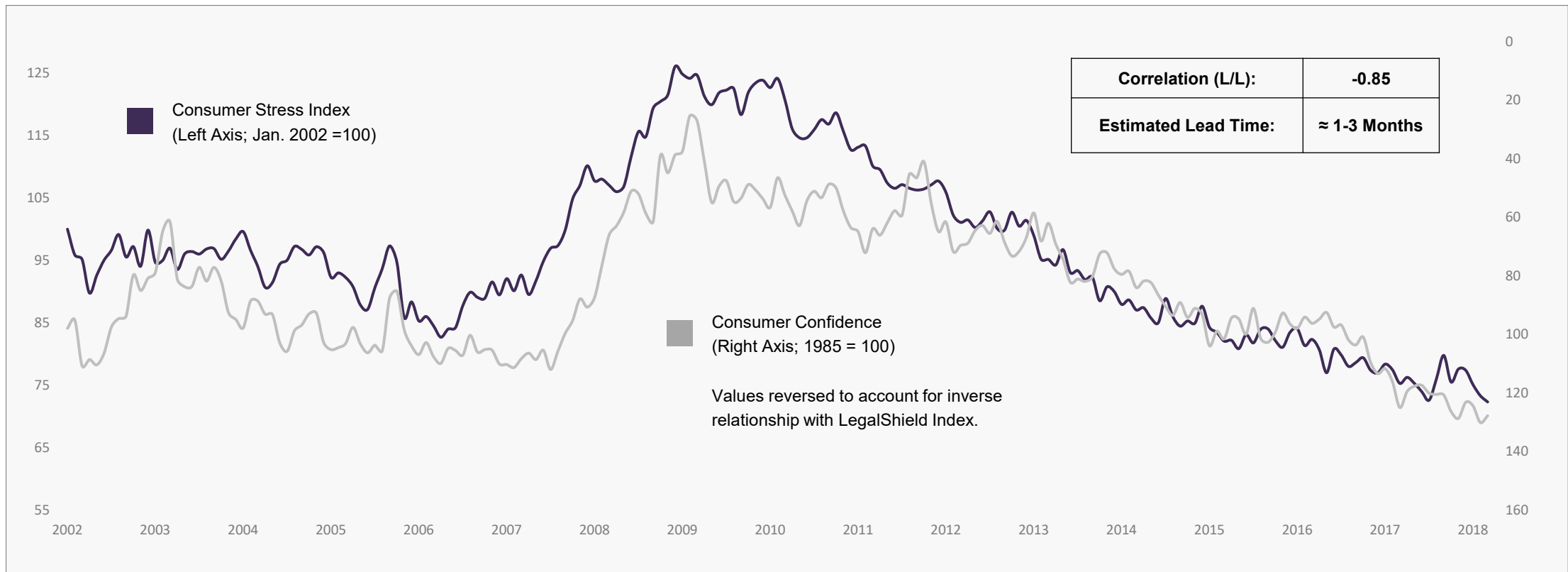
Test 2: Compared correlations between random samples of the data

Test 3: Compared earliest and latest data (2000 – 2005, 2010 – 2015) with middle of data (2006 – 2009)

Test 4: Compared correlations between 20% of most recent data (Nov 2012 – Dec 2015) and remaining data

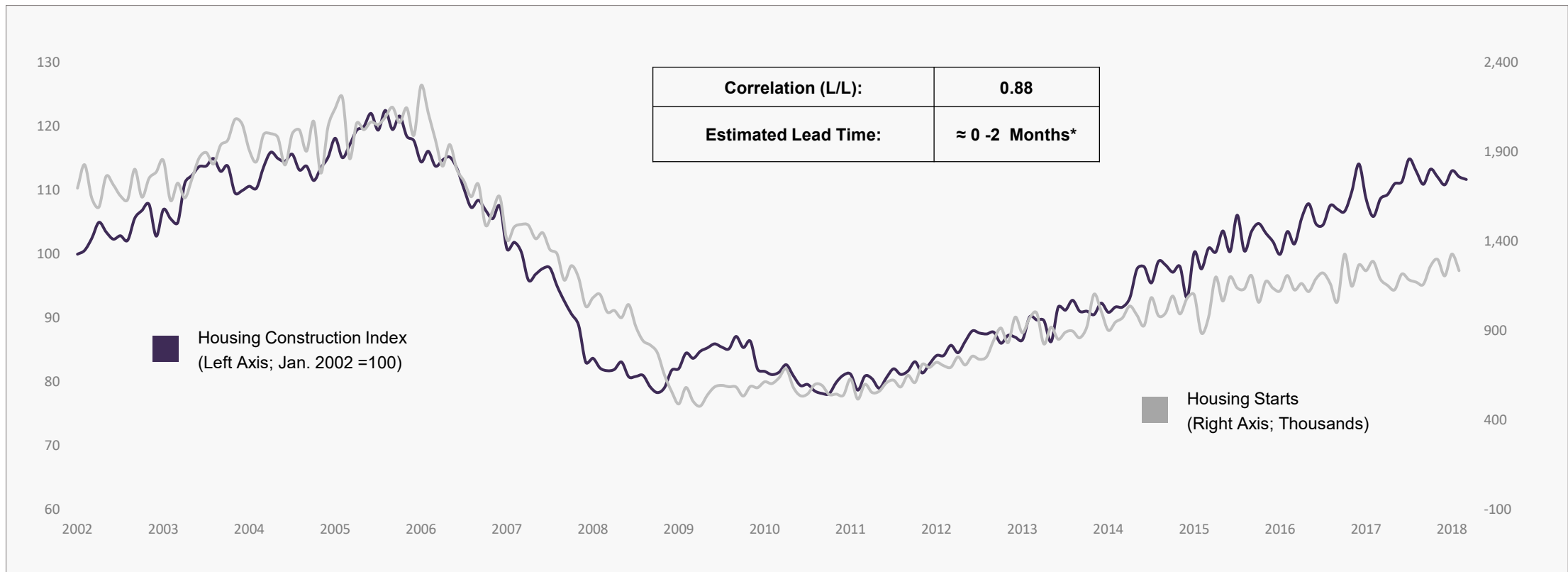
# Composite Index: Consumer Stress

AOLs: Bankruptcy; Foreclosure; Consumer Finance



# Composite Index: Housing Construction Index

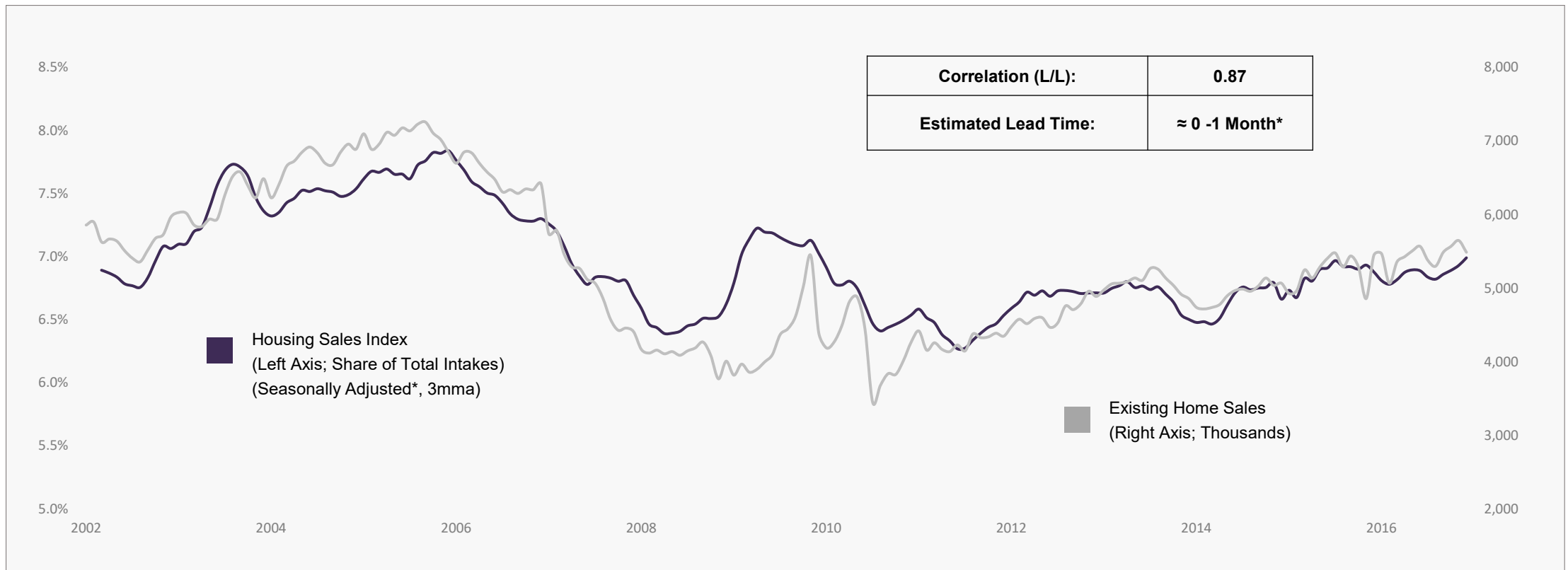
AOLs: Foreclosure; Real Estate\*



\*The Housing Construction Index component of the Housing Activity Index was seasonally adjusted using the Census Bureau's X-13 ARIMA-SEATS Seasonal Adjustment Program. In addition to its statistical lead time, the Index has a timing advantage over housing starts of roughly a week due to release schedules.

# AOL: Real Estate

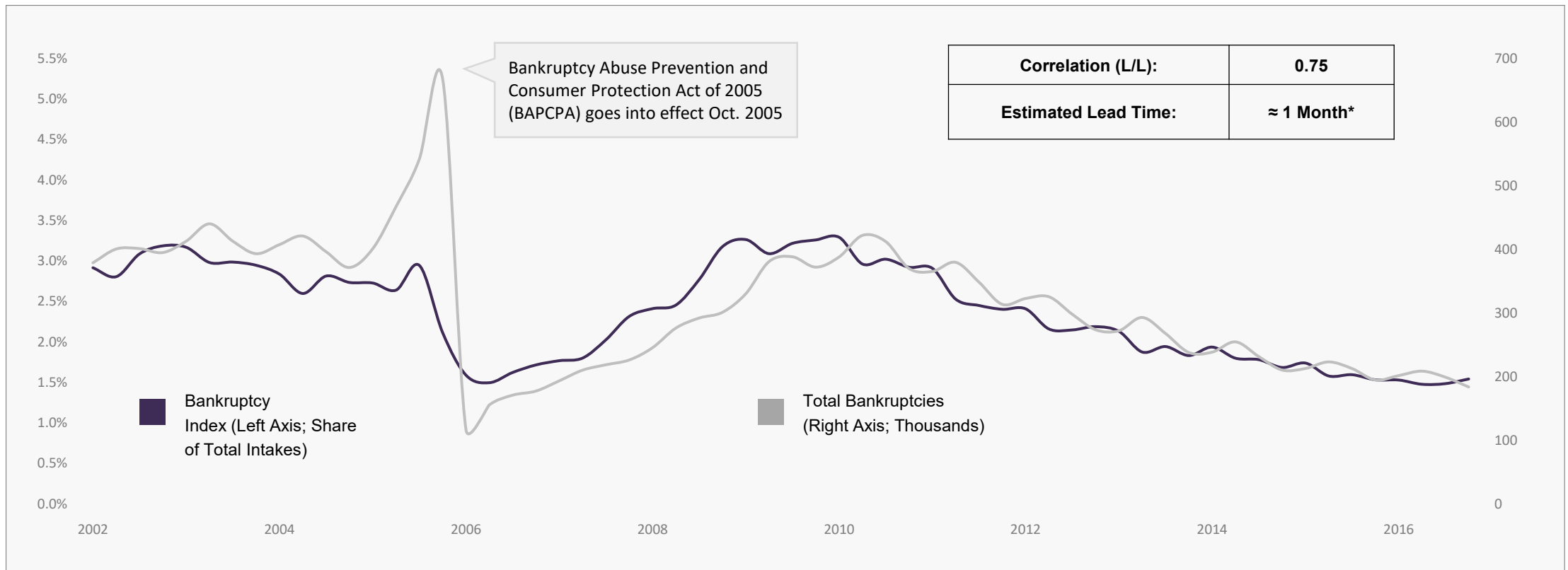
Target Series: Real Estate\*



\*The Housing Sales Index was seasonally adjusted using the Census Bureau's X-13 ARIMA-SEATS Seasonal Adjustment Program. In addition to its statistical lead time, the Index has a timing advantage of roughly two weeks over existing home sales due to release schedules.

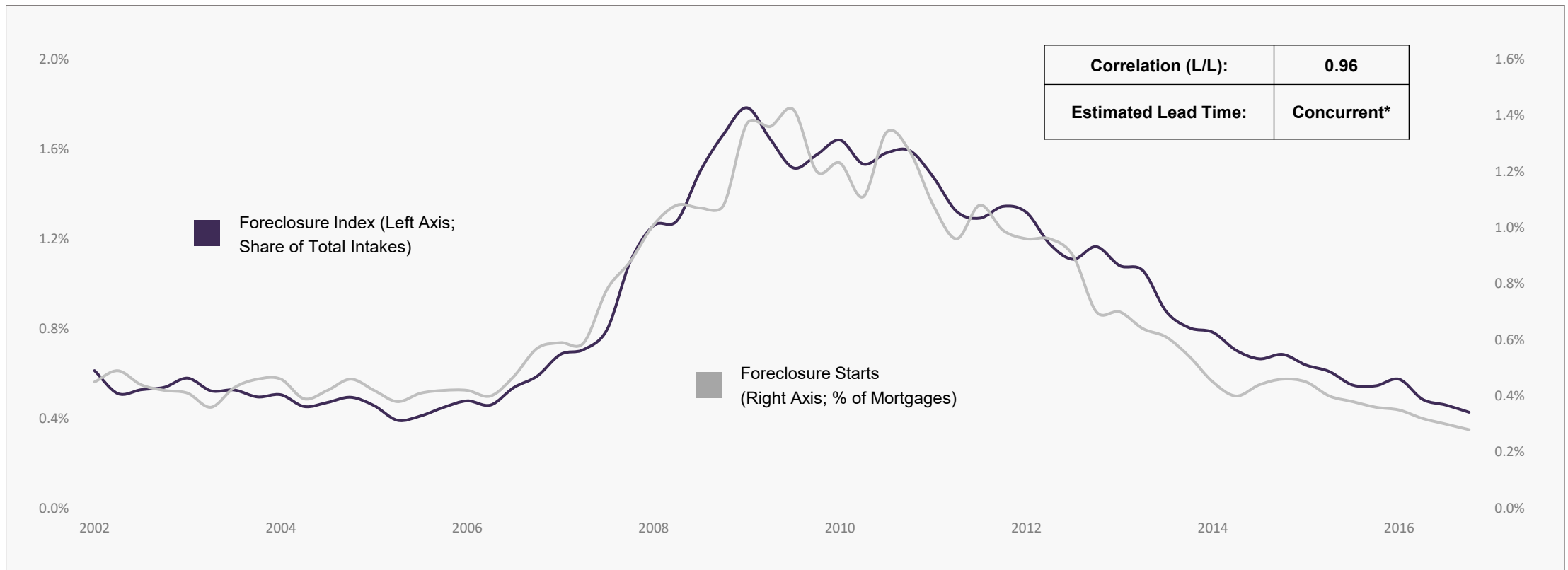
# AOL: Bankruptcy

Target Series: Consumer Bankruptcies



# AOL: Foreclosure

Target Series: Foreclosure Starts



\*Foreclosures starts are statistically coincident with the LegalShield Foreclosure Index, but the Index has a significant timing advantage time due to its monthly release (compared to the quarterly release of foreclosure starts).

# Results

## Summary of Key Findings

Summary of Results						
LEGALSHIELD LAW Index	TARGET SERIES	CORRELATION (LEVEL)	CORRELATION (Y/Y)	CORRELATION (Q/Q)	APPROXIMATE LEAD TIME	ROBUST ACROSS TIME
Bankruptcy	Bankruptcies	0.76	0.67	0.20	≈ 1 mo.	✓+
Foreclosure	Foreclosures	0.96	0.87	0.49	Coincident*	✓+
Housing Sales	Existing Home Sales	0.85	0.58	0.36	≈ 0-1 mo.*	✓
Consumer Stress	Consumer Confidence	-0.85	-0.58	-0.33	≈ 1-3 mo.	✓
Housing Construction	Housing Starts	0.88	0.55	0.23	≈ 0-2 mo.*	✓

Thank you!



Economic  
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