About LegalShield

#1 Provider of subscription-based legal plans to households

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

49 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.
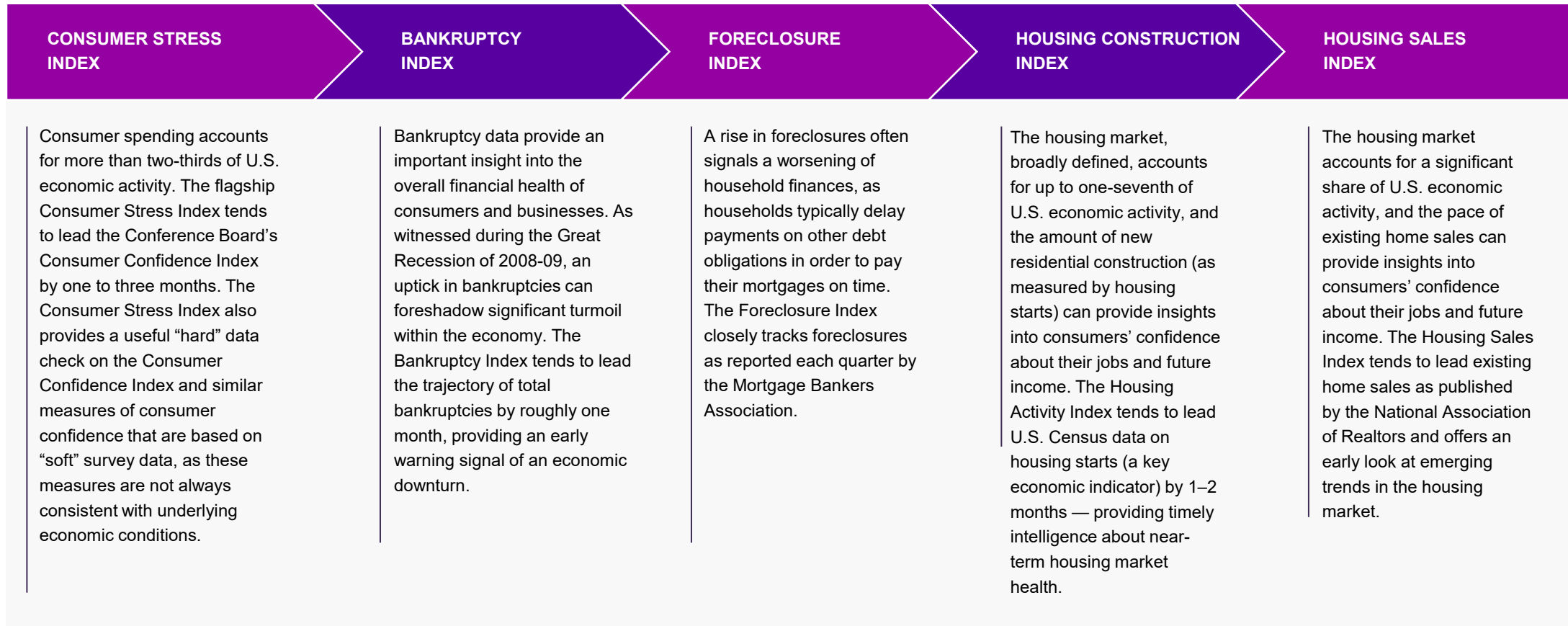
✓ **HIGH-FREQUENCY**
The LegalShield Economic Stress Index is based on data collected on a near real-time basis, and can be refreshed on a weekly, monthly, or quarterly basis depending on the user's needs.

✓ **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	BANKRUPTCY INDEX	FORECLOSURE INDEX	HOUSING CONSTRUCTION INDEX	HOUSING SALES 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 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.	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.	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.	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 declined in August to the second lowest reading on record. While the expiration of some federal support programs may cause stress to rise later this year, the LegalShield Consumer Stress Index suggests that stress should remain low in the near term.

The LegalShield Consumer Stress Index fell (improved) 1.7 points in August to 59.1. Meanwhile, the Conference Board's Consumer Confidence Index plunged more than 11 points in August to 113.8, the lowest level since February.

Pandemic-era federal protections, accumulated savings, and an improving labor market have kept consumer stress in check in recent months. For example, Visa's Spending Momentum Index, which improved in July and is above its year-ago level, revealed that consumers continue to spend on non-essential items, including in categories that were particularly hard-hit last year — a very positive sign for the economy, if sustained. The expanded Child Tax Credit payments are likely playing a role in raising both household income and spending levels: in July, household income jumped to its strongest reading since March and Mastercard reported that the credits boosted retail sales. The supplements, along with expanded SNAP (food stamp) benefits, should ease financial stress for at-risk consumers.

However, the expiration of many pandemic-era federal programs could lead to rising consumer stress in the months ahead. Federal unemployment insurance programs that expanded eligibility and increased weekly payments expired in early September, while the Supreme Court struck down the federal eviction moratorium in late August (as expected). Some renters who are behind on payments have applied for rental assistance, but only 10% of the $46 billion budget had been disbursed as of late July due to a variety of constraints, including high documentation burdens, long payment timelines, insufficient infrastructure for rental assistance support. Under current conditions, Goldman Sachs estimates that 750,000 households could face eviction before the end of 2021. And of course, the Delta variant is compounding these concerns, contribute to a severe slowdown in hiring in August, particularly in the leisure & hospitality and retail sectors.
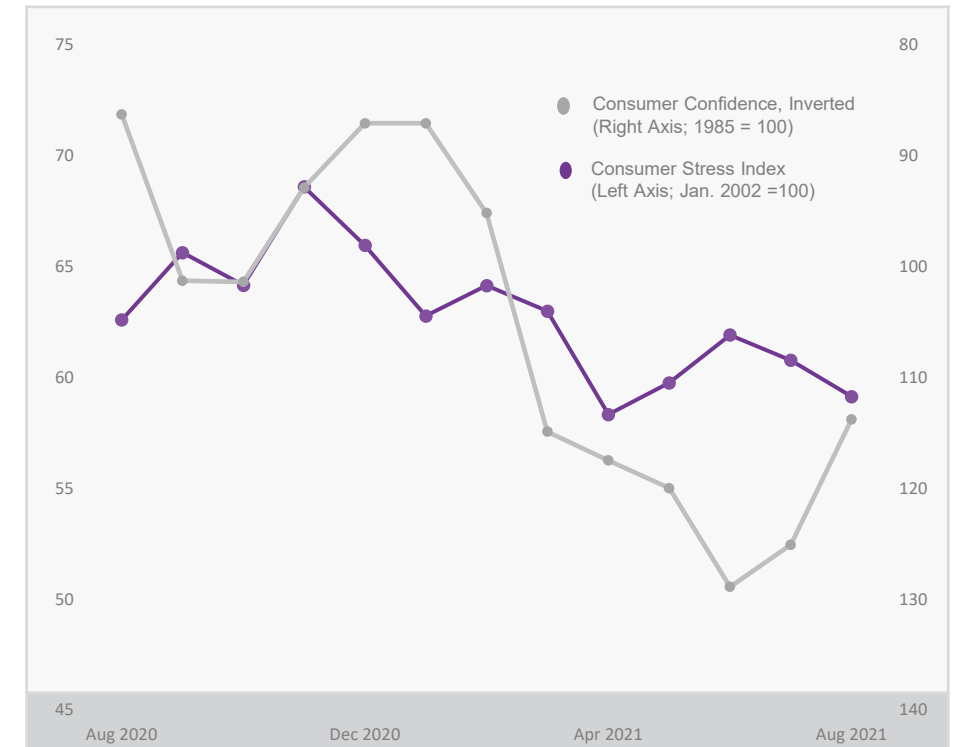
In sum, financial pressures may rise in the next few months as various government assistance programs expire. However, a recovering labor market and new federal income supplements may offset some of these pressures, and LegalShield data do not suggest that an increase in consumer financial stress is imminent.

Consumer Stress Index

Historical Trend Over Past 16 Years

Consumer Confidence, Inverted
(Right Axis; 1985 = 100)

Consumer Stress Index
(Left Axis; Jan. 2002 =100)

Movement Over Past 12 Months

Consumer Confidence, Inverted
(Right Axis; 1985 = 100)

Consumer Stress Index
(Left Axis; Jan. 2002 =100)
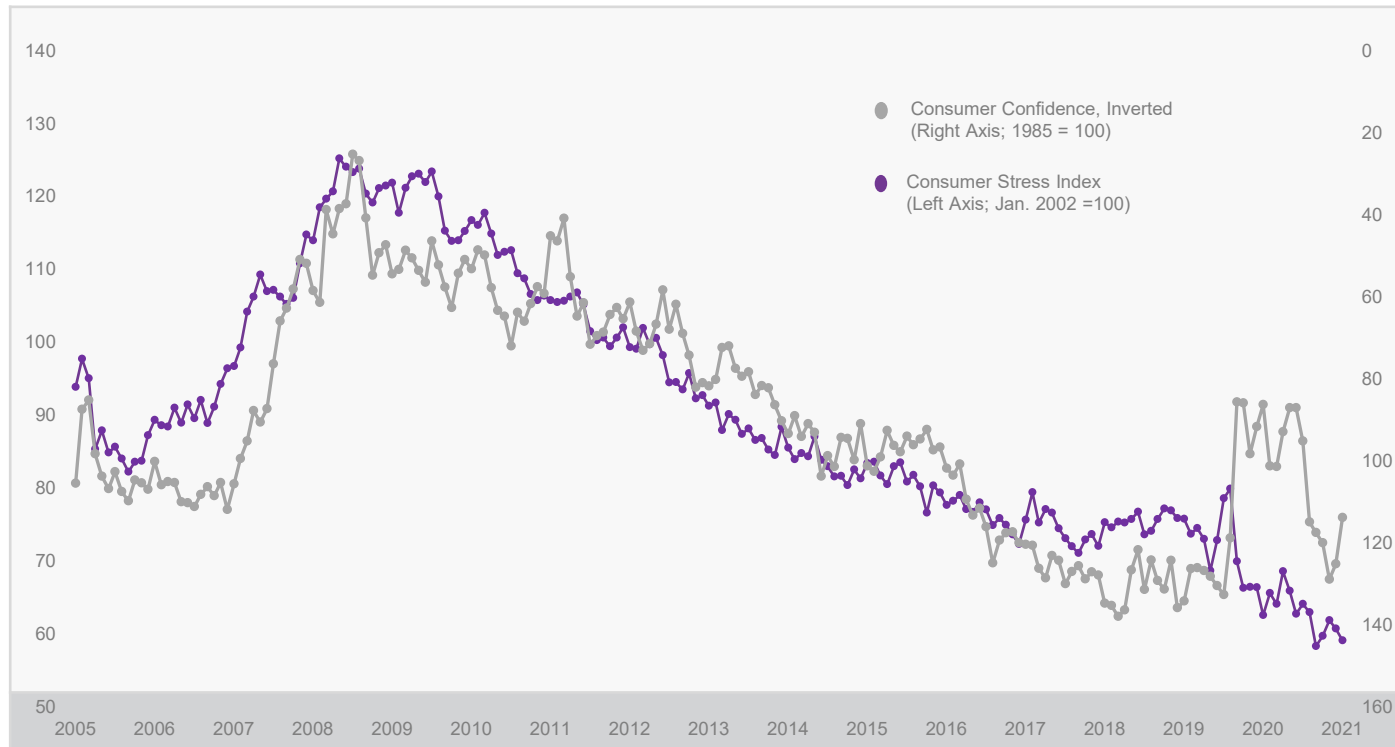
Bankruptcy Index

The LegalShield Bankruptcy Index fell to its lowest ever level in August. Bankruptcies are forecasted to remain low in the near term, although they may begin to rise later this year or in 2022 given the expiration of federal protections.

The LegalShield Bankruptcy Index decreased (improved) 3.7 points to 19.1 in August. Meanwhile, total seasonally adjusted bankruptcy filings fell by 6.4% to 32,503 in July and were down 14% compared to a year ago. Total non-business filings plunged 33% to about 444,000 for the year ending in June.

Bankruptcies have remained low since federal protections, including income supplements, moratoria on evictions and foreclosures, and loan forbearance programs were introduced last year. Many consumers increased savings in the early months of the pandemic by reducing discretionary spending and paying down debt. However, throughout the spring and summer, consumers have begun to return to pre-pandemic economic activity and spending has risen accordingly. According to the New York Fed, credit card balances increased by $17 billion in Q2 while auto loans increased by $33 billion. Despite the spending increase, delinquency rates remain low across loan types: for example, TransUnion reports that the share of auto loan borrowers that are 60+ days delinquent is low and similar to pre-pandemic levels. In response, lenders are growing more confident about consumers' financial health and loosening credit conditions.

It is important to note that while most consumers appears to be on solid financial footing as the economy recovers, some may find themselves in worsening financial situations once federal programs like expanded unemployment benefits expire and bill payments resume. Meanwhile, although the labor market recovery showed promise over the summer, job growth slowed sharply in August as the Delta variant curtailed hiring in retail and food service. These financial pressures are unlikely to translate to bankruptcy filings in the near term but may lead to increased filings next year.

Bankruptcy Index

Historical Trend Over Past 16 Years

Movement Over Past 12 Months

Total U.S. Bankruptcies
(Right Axis; Thousands)

Bankruptcy Index
(Left Axis; Jan. 2002 =100)
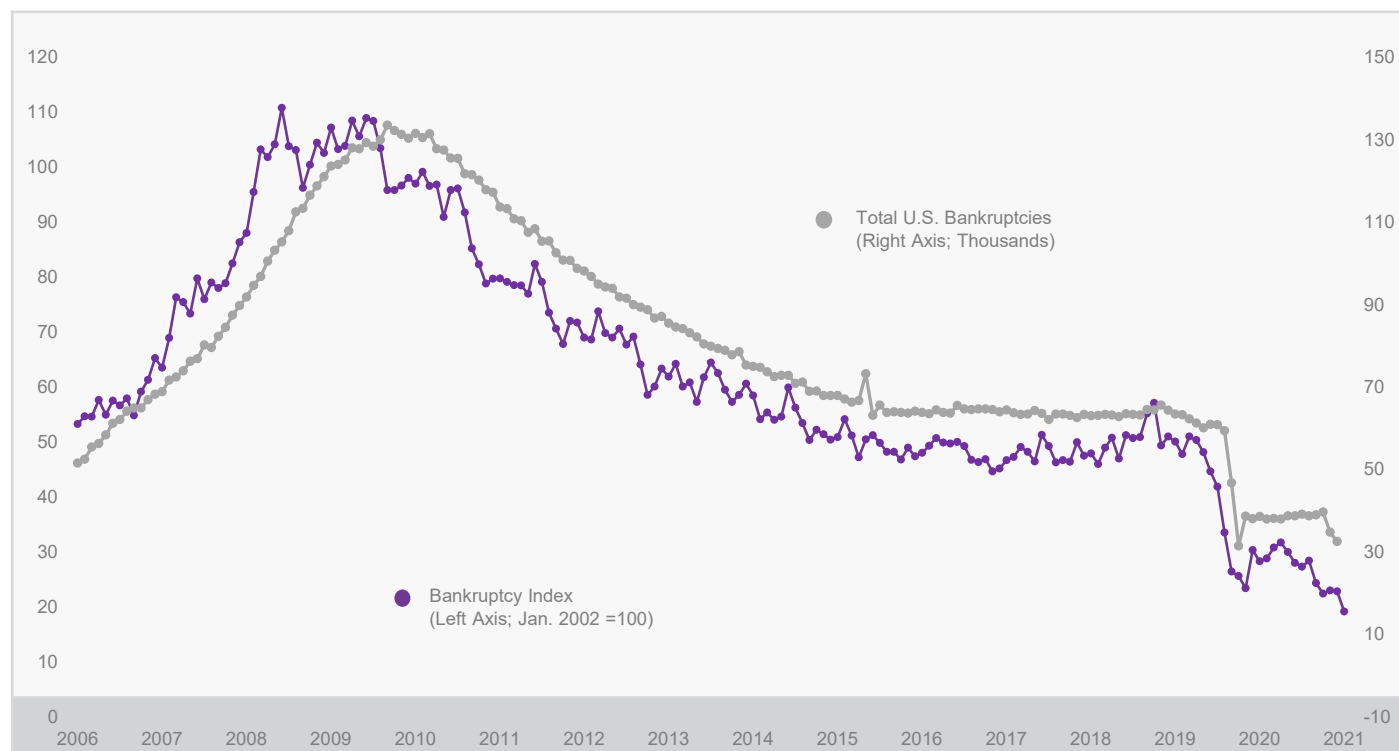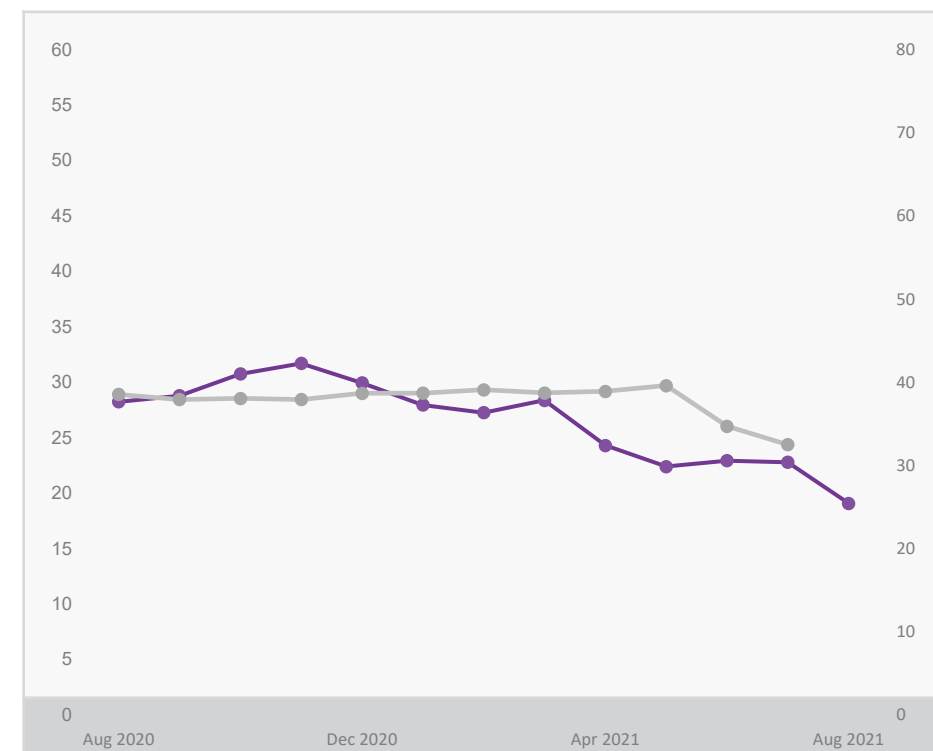
Foreclosure Index

The LegalShield Foreclosure Index was mostly unchanged in July at a historically low level. While foreclosures may rise in coming months due to the expiration for the foreclosure moratorium, a healthy housing market makes a wave of foreclosures unlikely.

The LegalShield Foreclosure Index edged down (improved) 0.2 point to 32.6 in August. Meanwhile, foreclosure starts were up marginally to 0.04% in the second quarter.
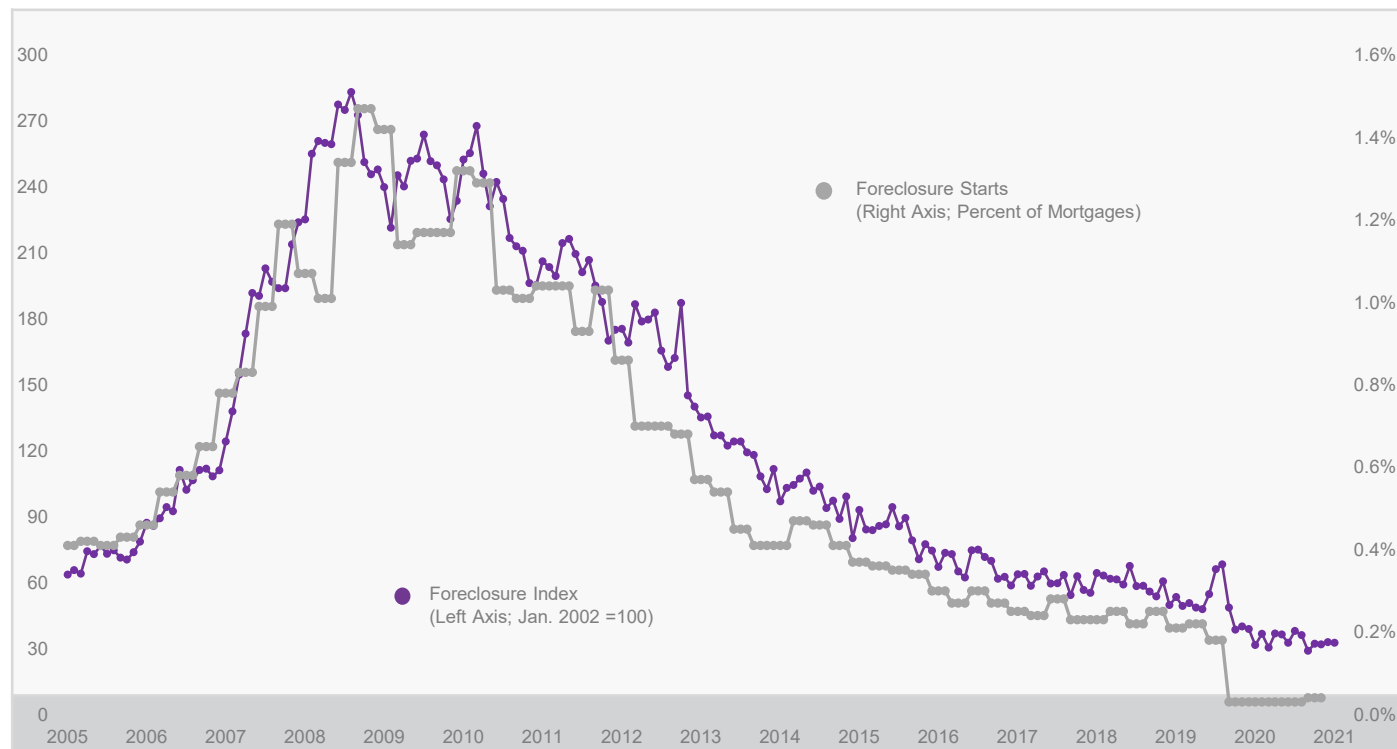
While the foreclosure moratorium and other government provisions kept foreclosures muted during the pandemic, the expiration of those programs may bring an increase in foreclosure activity this year. Black Knight reports that 1.45 million homeowners were seriously delinquent (90+ days past due) on their payments in the beginning of August, which was more than a million above the pre-pandemic level.

However, the overall delinquency rate has seen significant improvement over the past year, having declined 58% Y/Y and 5% M/M in July – the final month of the moratorium. Additionally, favorable conditions in the housing market suggest a wave of foreclosures is unlikely. Since the last housing market crash, lenders have paid more attention to the financial standing of borrowers, meaning that homeowners generally have more wealth than those before the Great Recession. Indeed, most mortgage originations over the course of the pandemic were for "super-prime" borrowers with credit scores above 760. Further, sky-high home prices mean that few existing homeowners owe mortgages higher than the overall value of their homes.

Overall, foreclosure activity is expected to drift upward in the coming months now that the federal foreclosure moratorium has expired. However, a surge in foreclosures as seen in the last housing crisis seems unlikely.

Foreclosure Index

Historical Trend Over Past 16 Years

Foreclosure Starts
(Right Axis; Percent of Mortgages)

Foreclosure Index
(Left Axis; Jan. 2002 =100)

Movement Over Past 12 Months

11
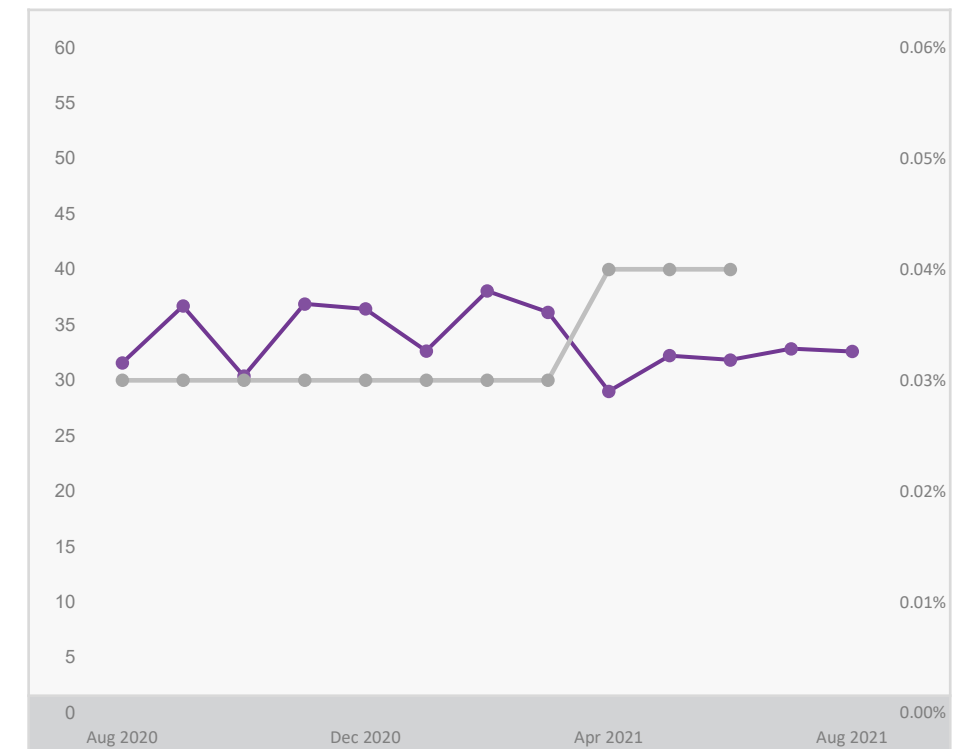
Housing Construction Index

The LegalShield Housing Construction Index rose to record another all-time high in August, reflecting elevated demand for new homes. However, supply-side headwinds have curtailed building activity in recent months and are expected to weigh on activity over the near term.

The LegalShield Housing Construction Index increased 1.5 points to 145.5 in August. Meanwhile, housing starts fell 7.0% in August – their lowest level since April – but were up 2.5% compared to year-ago levels.

Though low interest rates and desire for space have driven strong housing demand, housing construction is facing substantial headwinds. For example, the NAHB/Wells Fargo Housing Market Index (a measure of homebuilder sentiment) fell in August to the lowest level since July 2020. High input prices, labor shortages, and supply chain constraints are all contributing to the cooling outlook. For example, prices for overall building materials have risen nearly 20% in the last 12 months and 13% since the start of 2021. Meanwhile, a June survey by the U.S. Chamber of Commerce found that 88% of contractors indicated moderate to high difficulty hiring skilled workers and 38% of contractors had turned down work due to labor shortages. Indeed, builder hesitance to take on new projects in the face of these headwinds likely played a role in the historically high number of houses that are authorized for construction but not yet started, which climbed to its third-highest level ever in July (the highest two readings occurred in April and May).
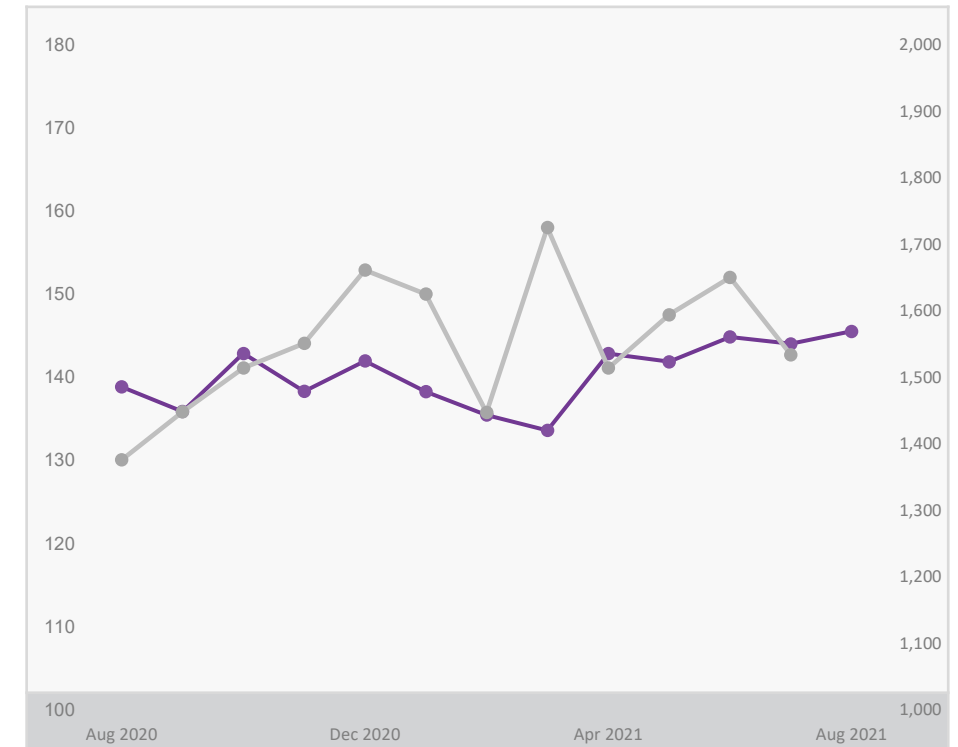
All told, demand for new houses is expected to remain robust, but supply issues may hold back construction activity in the near term.

Housing Construction Index

Historical Trend Over Past 16 Years

Housing Starts
(Right Axis; Thousands)

Housing Construction Index
(Left Axis; Jan. 2002 =100)
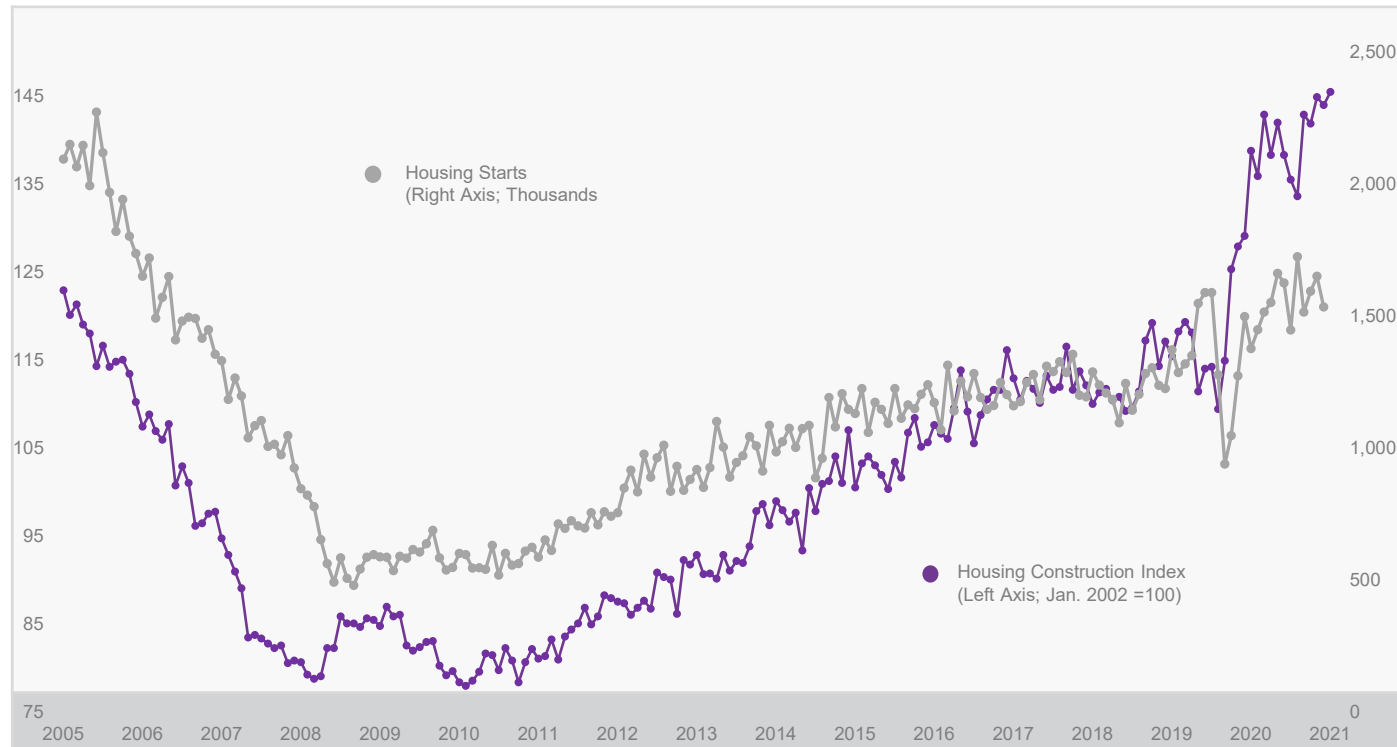
Movement Over Past 12 Months

Housing Sales Index

The LegalShield Housing Sales Index rose in August to another record high. Existing home sales are forecasted to remain strong for the next few months, though sales may ease compared to the breakneck pace of earlier this year due to affordability constraints.

The LegalShield Housing Sales Index increased by 1.4 points in August to 120.3. Meanwhile, existing home sales rose 2.0% in July and were 1.5% above year-ago levels.

Low interest rates, desire for more space, and accumulated savings have contributed to strong housing demand. For example, the New York Fed reports that mortgage originations — which are near an all-time high — drove household debt to $15 trillion, the highest level in 14 years. Meanwhile, an analysis by the National Association of Home Builders found that the median size of new single-family homes grew in 2021 Q2 as many people continued to work remotely.

However, high home prices are weighing on affordability and, by extension, consumer demand. The National Association of Realtors' national median sale price in 2021 Q2 was up 22% Y/Y. Similarly, the Federal Housing Finance Agency's house price index rose a record 19% in the 12 months ending in June, which is when the agency believes housing prices peaked. These high prices are reducing consumers' ability to buy homes: The NAHB/Wells Fargo House Opportunity Index found that the share of homes that were affordable to families earning a median income of about $80K fell from 63% in Q1 to 57% of Q2, which is the lowest reading in the series which began in 2012.

Looking ahead, though affordability concerns may be weighing on homebuying activity on the margins, housing sales will likely remain healthy for the foreseeable future, an outlook corroborated by LegalShield data.

Housing Sales Index

Historical Trend Over Past 16 Years

Movement Over Past 12 Months

Existing Home Sales
(Right Axis; Thousands)

Housing Sales Index (Seasonally Adjusted)
(Left Axis; Jan. 2002 =100)
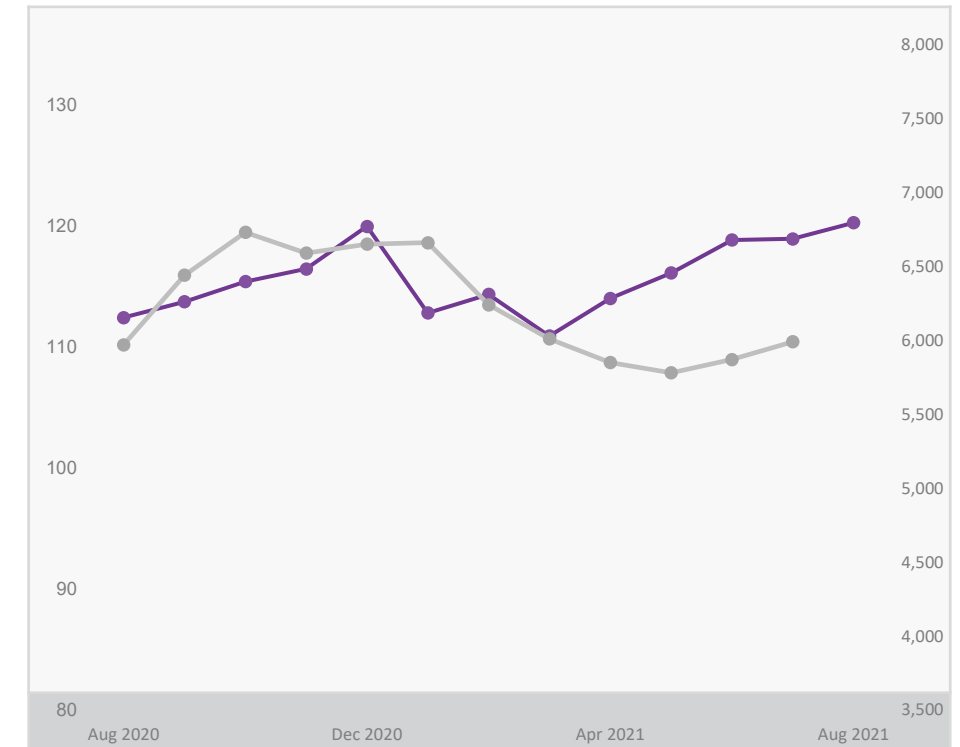
Technical Appendix

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

LegalShield "Housing Construction" Index

✓ **Component AOLs:** (1) Bankruptcy;
(2) Consumer/Finance; (3) Foreclosure

✓ **Component AOLs:** (1) Real Estate;
(2) Foreclosure

✓ **Target Indicator:** Consumer Confidence

✓ **Target Indicator:** Housing Starts

✓ **Performance:** -0.85 Correlation;
1-3 Month Lead

✓ **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.

6

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.

Active Subscribers (Left Axis; Thousands)

Total Intakes (Right Axis; Thousands)

Excluded data prior to 2002, as the rapid expansion of intakes (presumably due to overall business growth) has the potential to distort measures of "pure demand" for legal services.
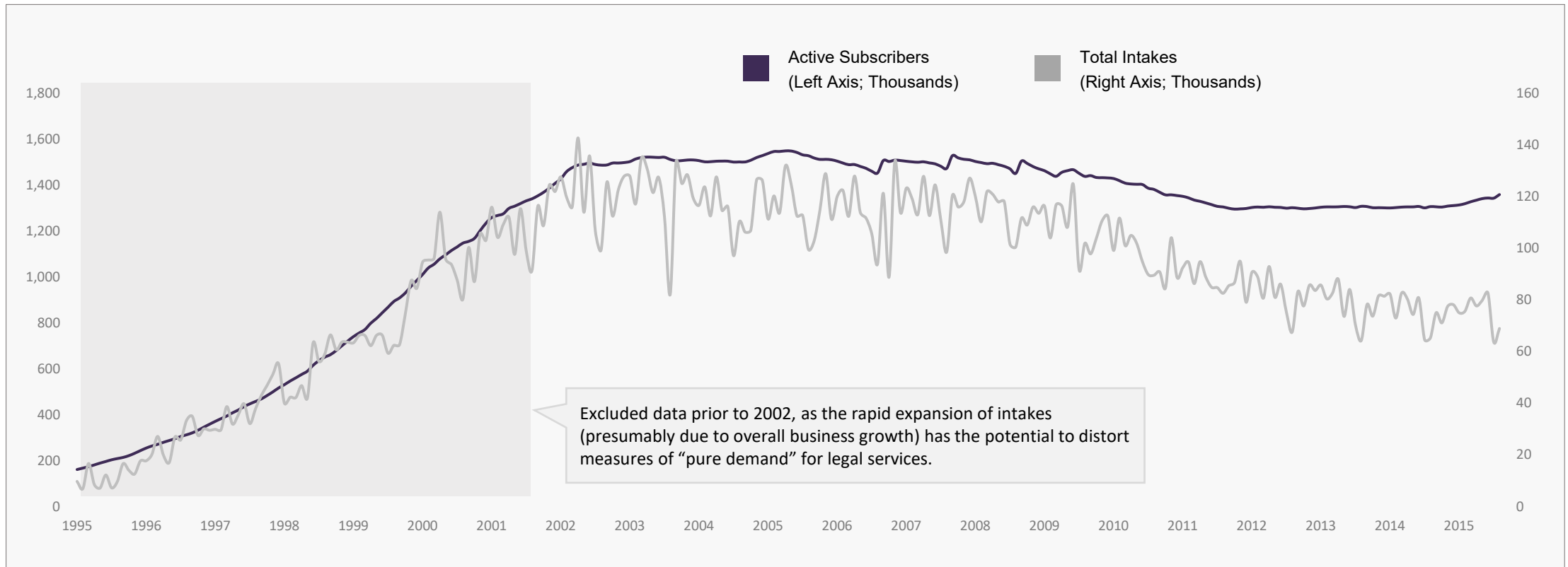
Analytical Scope

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

Dataset Development

Trends in demand for AOLs were fairly constant across plan types.

All subscribers were used in the analysis; a "same subscriber" sub-sample was used to validate results.

Standardizing intake data as a share of total intakes produced stronger results.

- **Full LegalShield Intake Dataset (2000 – 2015)**

All Plan Types
- **All Subscribers** — n = 19,571,508 → Share of Total Intakes / Share of Subscribers
- Same Subscribers — n = 1,540,704 → Share of Total Intakes / Share of Subscribers

Family Plan Types
- All Subscribers — n = 16,583,632 → Share of Total Intakes / Share of Subscribers
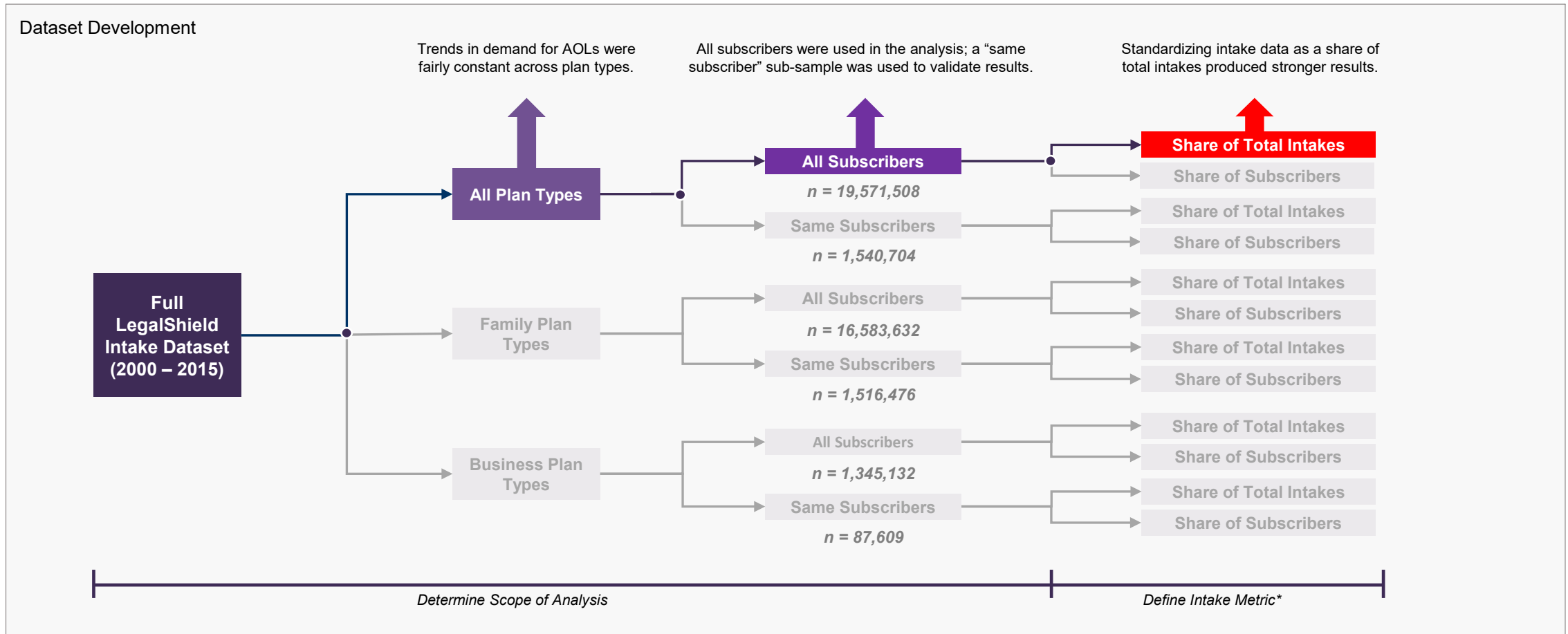- Same Subscribers — n = 1,516,476 → Share of Total Intakes / Share of Subscribers

Business Plan Types
- All Subscribers — n = 1,345,132 → Share of Total Intakes / Share of Subscribers
- Same Subscribers — n = 87,609 → Share of Total Intakes / Share of Subscribers

Determine Scope of Analysis　　　*Define Intake Metric**

*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.
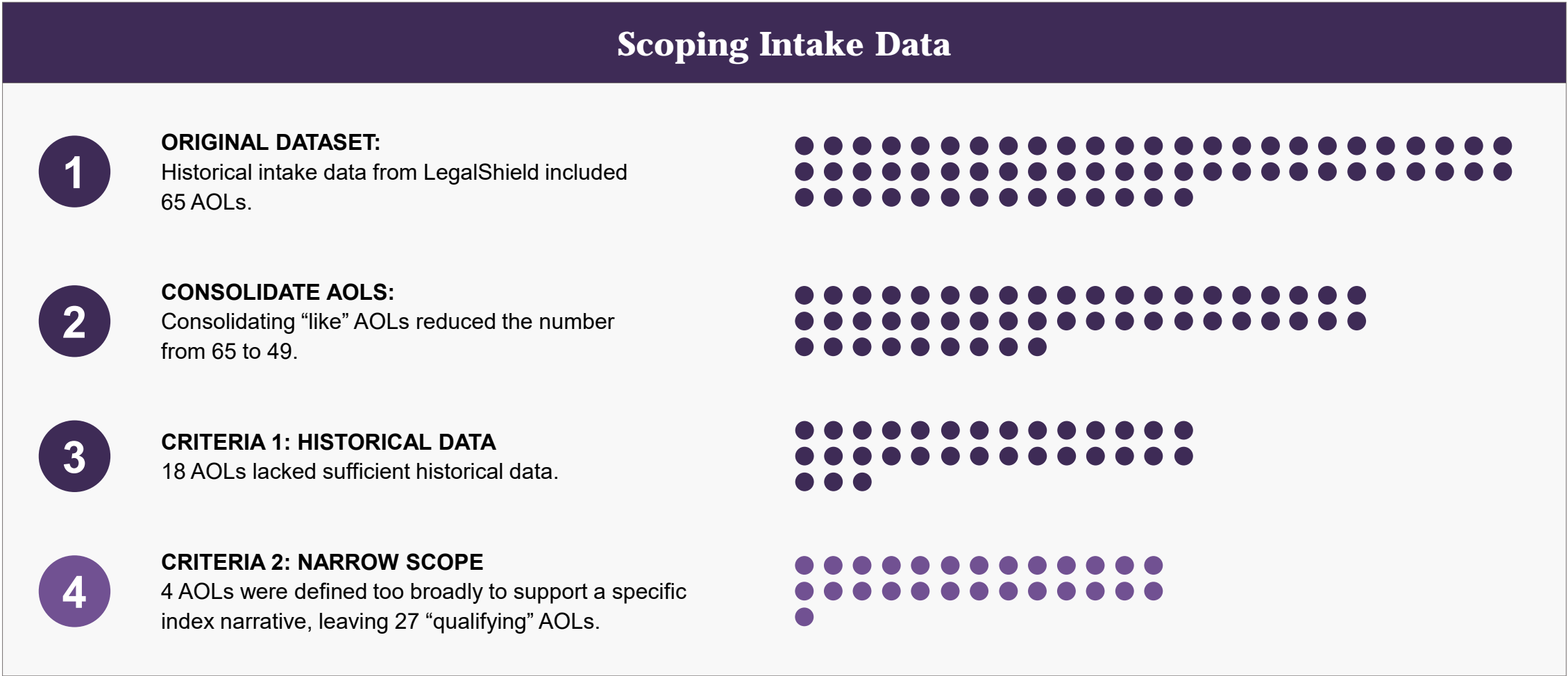
Filter AOL

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	-		✓	
	TOTAL		31	44	27

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

Less Rigorous ← | Level/Level | Year/Year | 6 Month/Month | 3 Month/Month | 1 Month/Month | → More Rigorous

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)
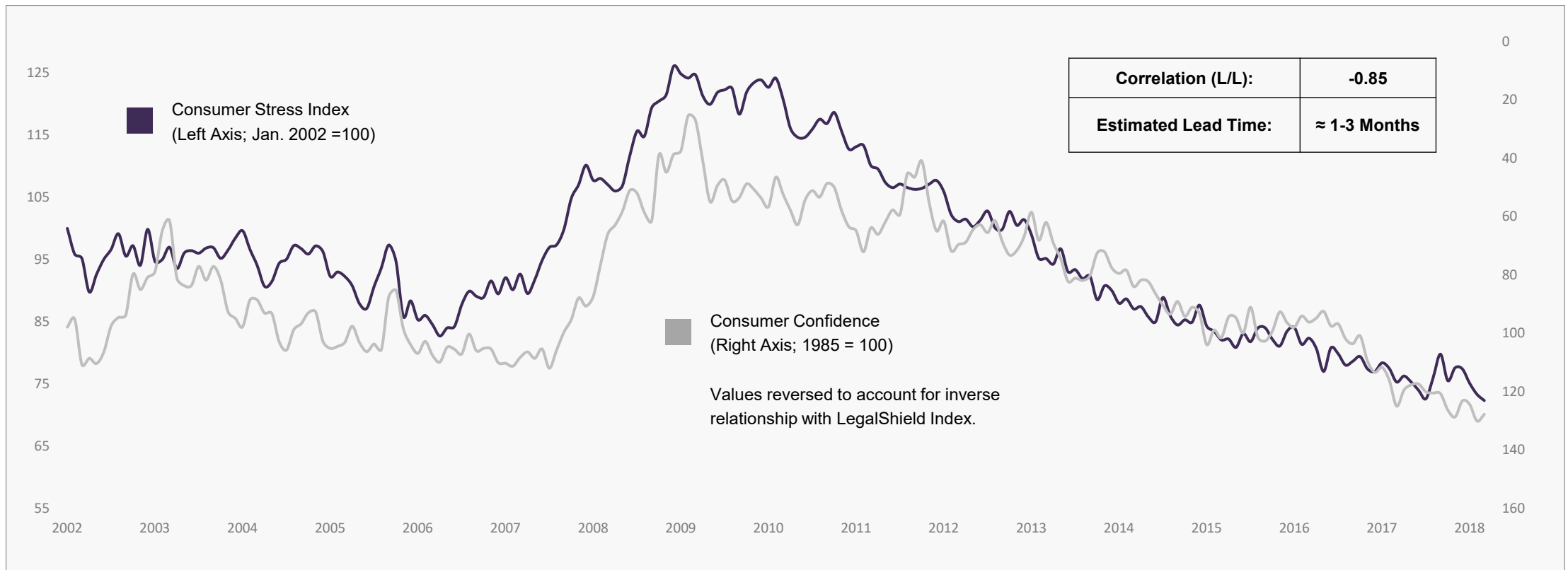
Test 2: Compared correlations between random samples of the data

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
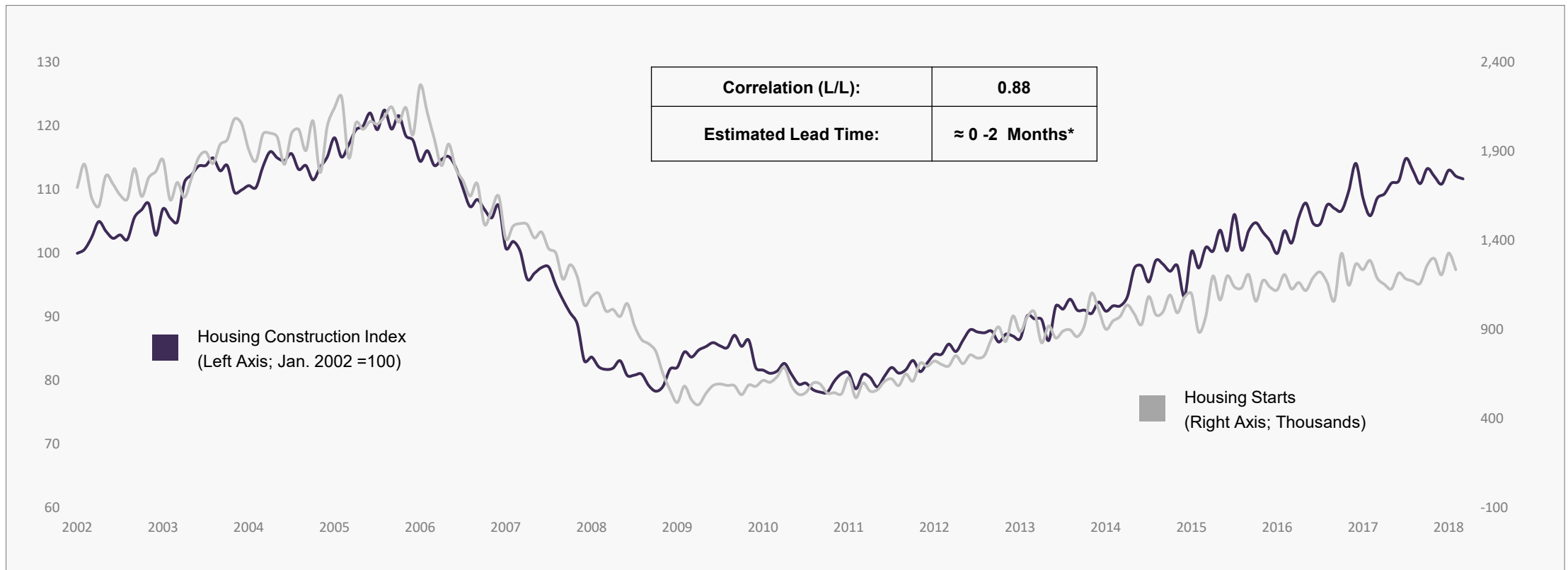
Composite Index: Consumer Stress

AOLs: Bankruptcy; Foreclosure; Consumer Finance

Consumer Stress Index
(Left Axis; Jan. 2002 =100)

Consumer Confidence
(Right Axis; 1985 = 100)

Values reversed to account for inverse relationship with LegalShield Index.

Correlation (L/L):	-0.85
Estimated Lead Time:	≈ 1-3 Months

Composite Index: Housing Construction Index

AOLs: Foreclosure; Real Estate*

Correlation (L/L):	0.88
Estimated Lead Time:	≈ 0 -2 Months*

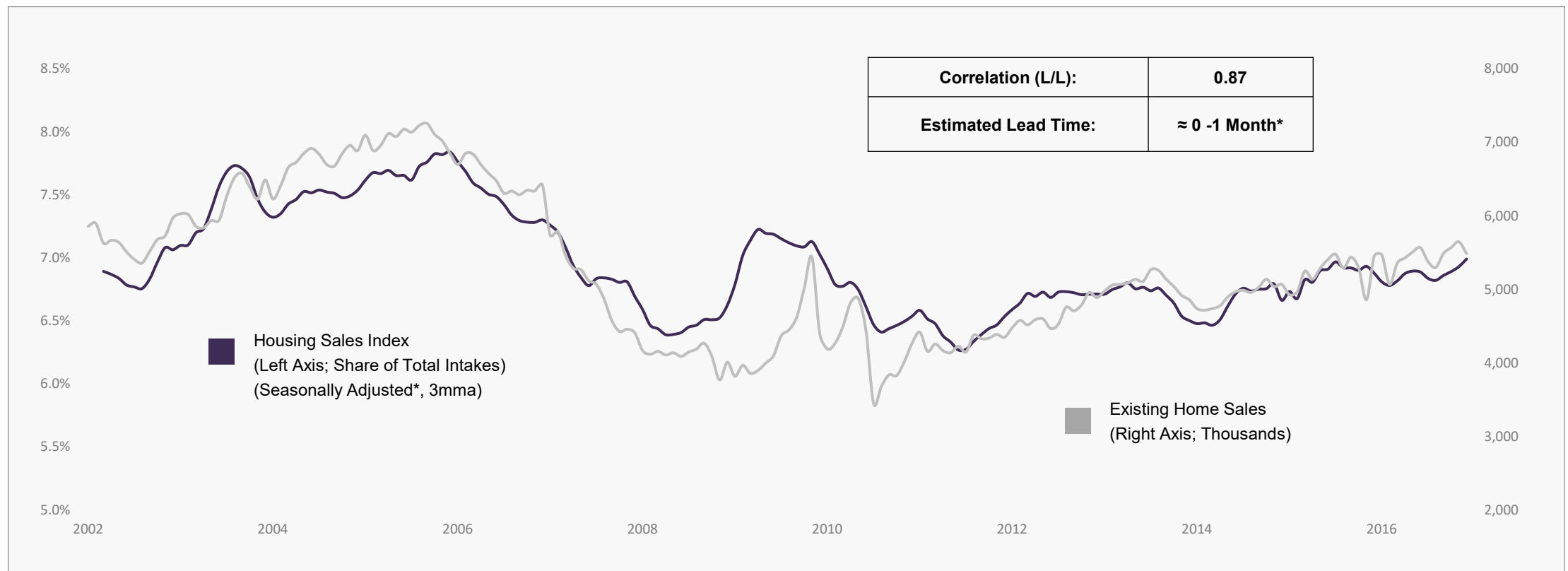Housing Construction Index
(Left Axis; Jan. 2002 =100)

Housing Starts
(Right Axis; Thousands)

*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.
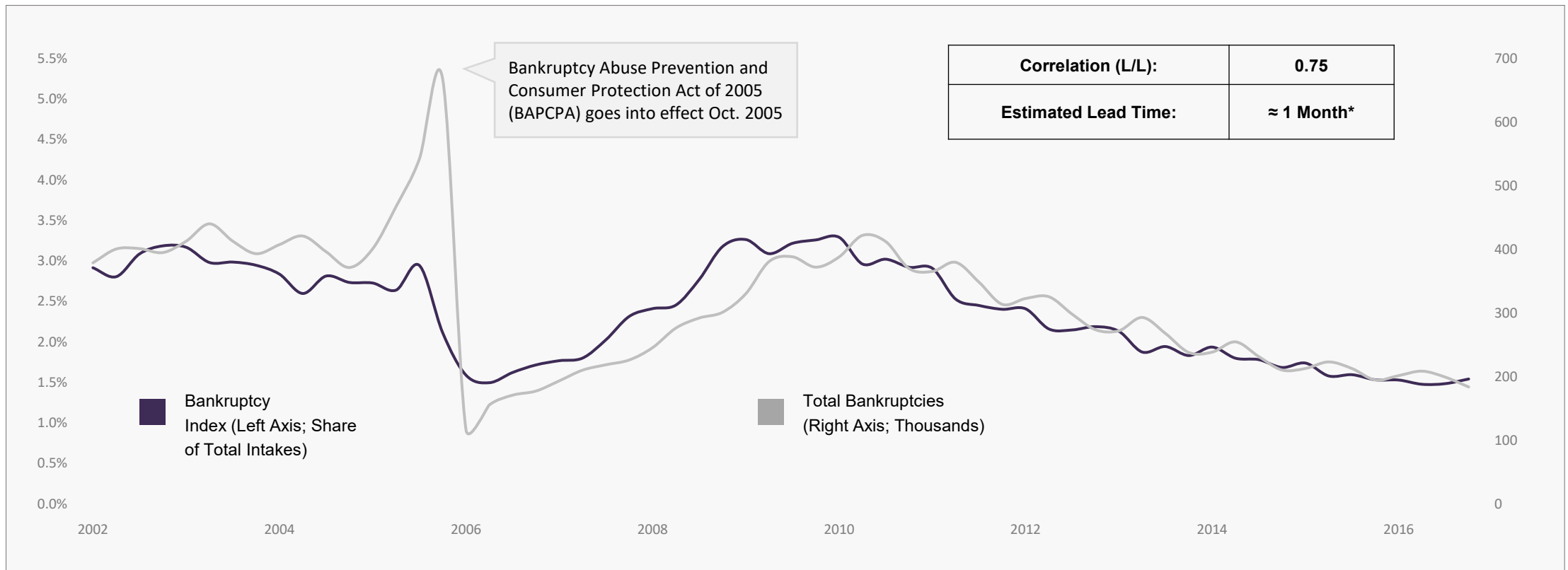
AOL: Real Estate

Target Series: Real Estate*

Correlation (L/L):	0.87
Estimated Lead Time:	≈ 0 -1 Month*

Housing Sales Index
(Left Axis; Share of Total Intakes)
(Seasonally Adjusted*, 3mma)

Existing Home Sales
(Right Axis; Thousands)

*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.
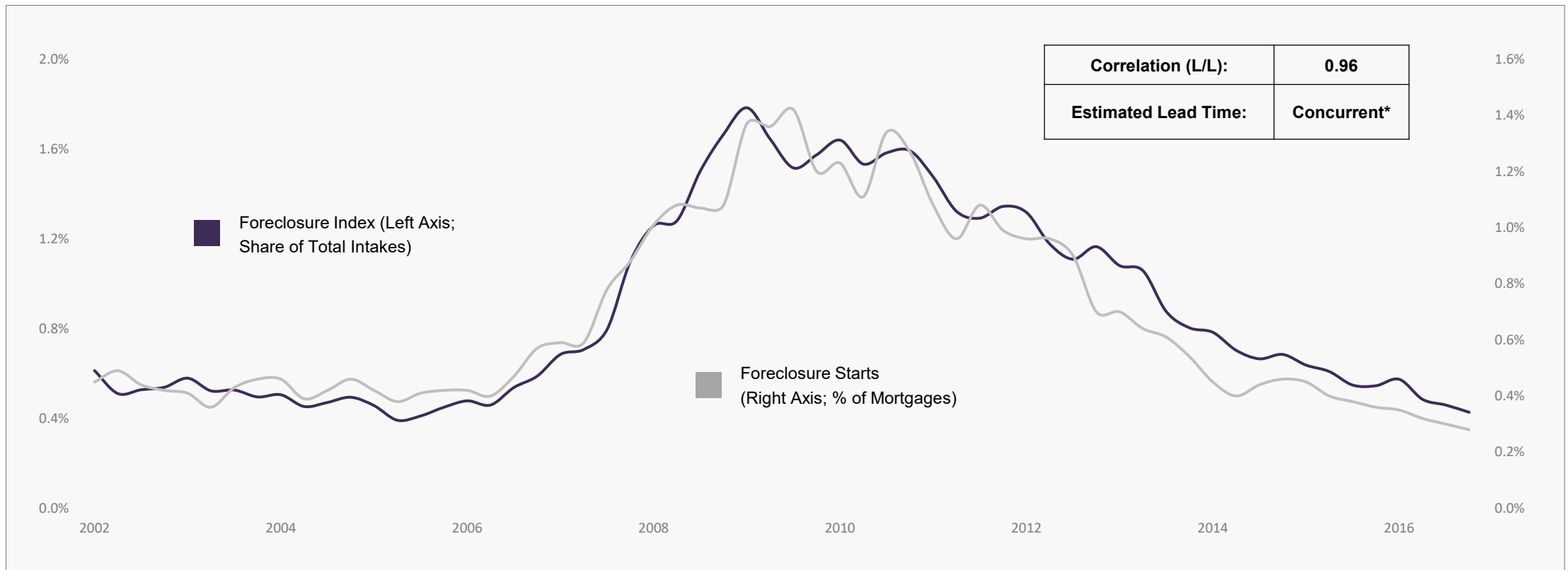
AOL: Bankruptcy

Target Series: Consumer Bankruptcies

Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (BAPCPA) goes into effect Oct. 2005

Correlation (L/L):	0.75
Estimated Lead Time:	≈ 1 Month*

Bankruptcy Index (Left Axis; Share of Total Intakes)

Total Bankruptcies (Right Axis; Thousands)

AOL: Foreclosure

Target Series: Foreclosure Starts

Correlation (L/L):	0.96
Estimated Lead Time:	Concurrent*

Foreclosure Index (Left Axis; Share of Total Intakes)

Foreclosure Starts (Right Axis; % of Mortgages)

*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!

LegalShield | Economic Stress Index™