# Acquisition Master Class



ACQUISITION

mather:

August 2020

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#### MATHER SPECIALIZES IN APPLIED ANALYTICS

**10:1** RETURN ON INVESTMENT

Our typical client engagement provides a 10-to-1 return on investment. We increase revenue yield and reduce risks from pricing actions. 200 CLIENTS IN DIVERSE INDUSTRIES

Mather works with organizations in several industries to help them adapt their business models to digital disruption. **18** YEARS EXPERIENCE & TURNKEY CONSULTING

Founded in 2002 with offices in North America and Europe. Our consulting services include extensive reporting with A/B testing and model validation. We are fully GDPR, CPPA compliant and SOC2 audited.

The New York Times



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\$6B+

REVENUE

MANAGEMENT

We provide customer

analytics and yield

management for over 200

clients with \$6 billion in

combined annual revenue

and 30 million customers.



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## **INDUSTRY CONTENT BENCHMARKS**

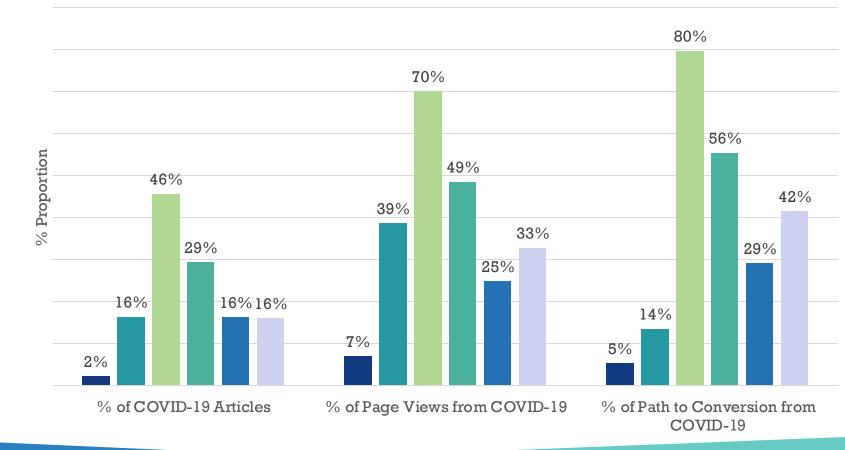
In the most recent 30-day period, explicitly tagged COVID-19 content that appears on the path to conversion has declined to 42% vs. a high of 80% during the April period.

COVID-19 articles produced has stabilized in the last 60 days at 16% of all articles from a high of 46% during the April period.

The impact of COVID-19 content on path to conversion and engagement mirrors the pattern of new COVID-19 cases in the United States. Ratios of COVID-19 Content Production, Consumption, and Correlation with Conversion

Period Ending Feb 16
Period Ending March 17 Period Ending April 16

Period Ending May 16 Period Ending June 15 Period Ending July 15





### **INDUSTRY SUBSCRIPTION BENCHMARKS**

New conversion growth is past its peak and slowly trending down towards March levels.

There continues to be relative growth in subscriptions compared to February.

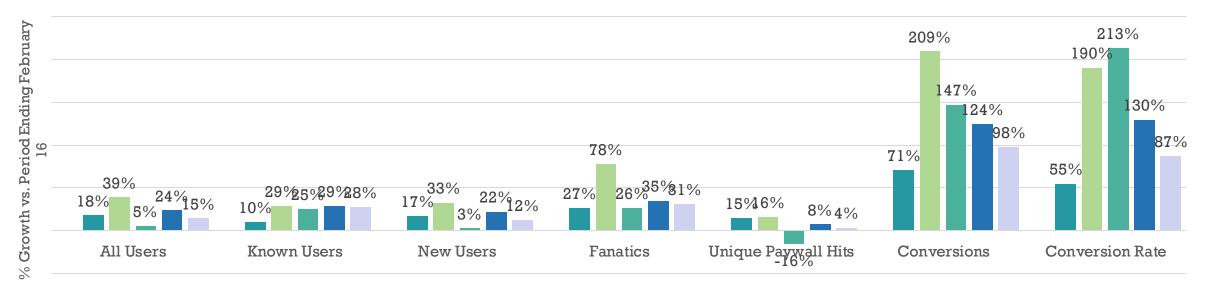
Fanatic and Known users have stabilized since May, suggesting an overall growth in engaged and high propensity users.

The number of users hitting the paywall is only 4% higher than February levels, suggesting non-paywall channels are key for subscription growth.

The Conversion Rate is improved from the influx of Fanatic users as well, making the paywall more effective.

30-day Growth in Key Audience Metrics vs. February 16

Period Ending March 17 Period Ending April 16 Period Ending May 16 Period Ending June 15 Period Ending July 15

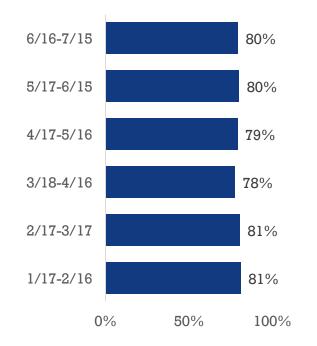


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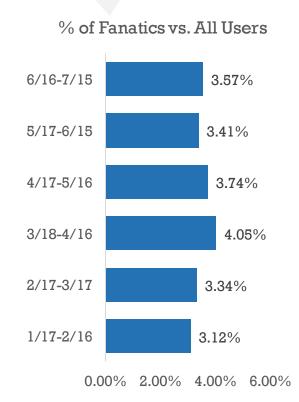
### **KEY METRICS BY AUDIENCE TYPE**

Though the aggregate volume of New Users grew significantly throughout March-April, the proportion of New Users has remained around 80%.

#### % of New Users vs. All Users

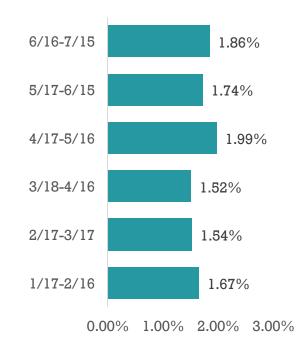


The aggregate volume of Fanatic Users grew significantly throughout March-April, and proportion of Fanatics has grown. The proportion has been declining since the April peak.



The aggregate volume of Known Users has grown and stabilized since March and the *proportion* of Known Users is hovering closer to 2% in recent months.





### **KEY METRICS FOR SUBSCRIPTION GROWTH**

The Conversion Ratio measures all conversions vs. all users. the conversion ratio peaked in April-May though is still higher than the start of the year. Hitting the paywall includes all types (meter, subscriber only, hardwall). The proportion of paywall hits has declined, likely due to "free" COVID-19 content and one-time users.

% of Users Hitting the

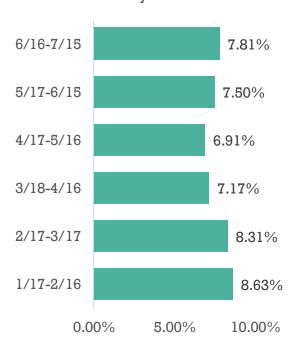
Paywall

The Conversion rate is exclusive to the paywall channel (no voluntary or email). The conversion rate peaked in April-May though is still higher than the start of the year.

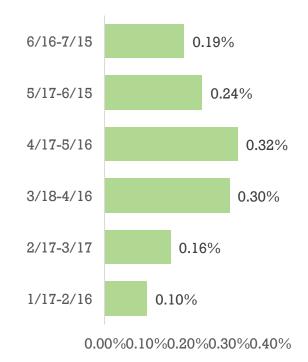


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#### Total Conversion Ratio



#### Paywall Conversion Rate



#### **CONCEPTS WE WANT TO SHARE TODAY**



## PRICE ELASTICITY/ TENURE

## Price elasticity differs greatly by tenure level.

SUB. YEAR	PRICE STOPS	PRICE ELASTICTIY
O-1	4.3%	-0.9
1-2	2.2%	-0.4
2-3	1.3%	-0.3
3-4	1.3%	-0.3
4-5	0.9%	-0.2
5-6	0.5%	-0.1

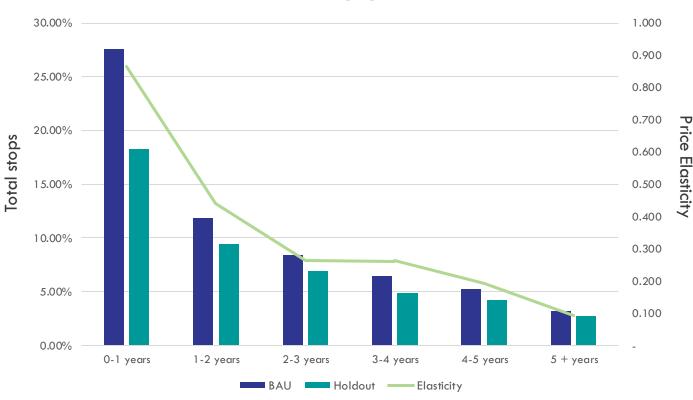
- BAU target subs received 5% increase
- Holdout subs received no increase

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• Differences in total stops due to price change

Similar findings are true with Digital Engagement, Income levels and Age groups.

#### Price Sensitivity by Tenure Level



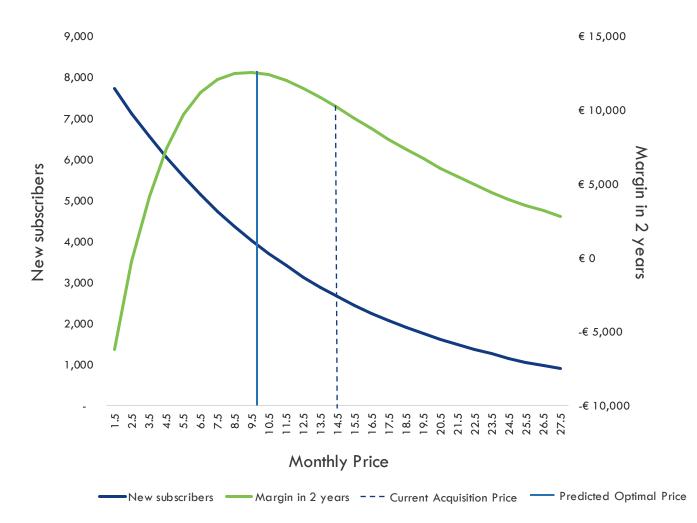
## CUSTOMER ACQUISITION – OFFER PRICE

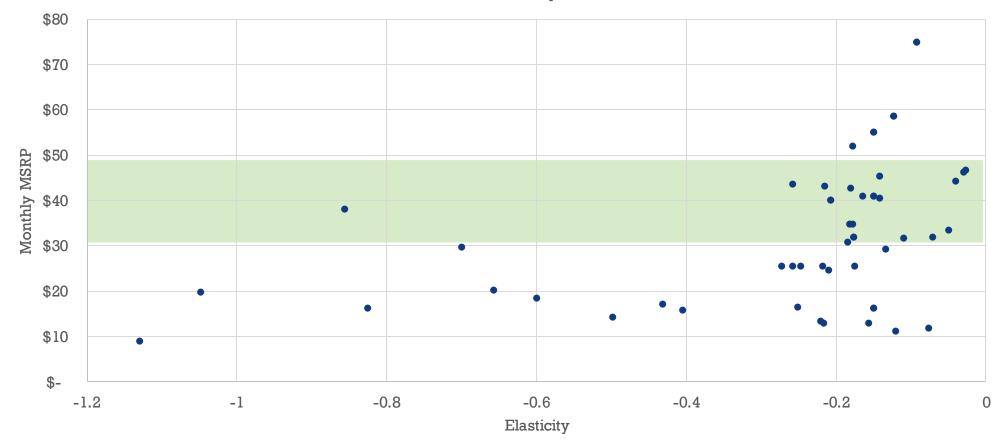
Offer pricing balances quality and quantity:

- Higher prices attract fewer customers with less churn
- Lower prices attract more customer with higher churn

Optimal prices maximize total expected operating margins

Mather uses predicted customer retention and conversion rates to find optimal prices





MSRP and Price Elasticity Benchmarks

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### DIGITAL AUDIENCE ENGAGEMENT SEGMENTS

	FANATICS	ENTHUSIASTS	STABLE USERS	DABBLERS	FLYBYS	NON-ENGAGED
% OF AUDIENCE	2.0%	4.0%	6.9%	12.2%	44.0%	30.9%
ALL USERS	89,978	181,331	310,245	549,557	1,979,735	1,392,588
PAGE VIEWS	32.4	8.2	4.1	2.4	1.2	1
ARTICLE PAGE VIEWS	14.9	5.6	3	1.9	1.1	0.8
UNIQUE DAYS	5.1	1.8	1.1	0.9	0.6	1
VISITS PER USER	13.9	4.4	2.3	1.5	1	1
TIME PER VISIT	5:33	5:50	4:53	4:35	2:15	0:00
SCROLL DEPTH	54%	49%	49%	48%	42%	0.02%
AD REVENUE	\$0.72	\$0.18	\$0.09	\$0.06	\$0.03	\$0.02
% OF AD REVENUE	27.2%	13.7%	11.7%	13.8%	24.9%	8.8%
% KNOWN USERS	4.07%	0.44%	0.17%	0.05%	0.01%	0.00%
COOKIES PER KNOWN USER	1.71	1.1	1.04	1.03	1	1

#### LIMITATIONS OF PROPENSITY SCORING

	FANATICS	ENTHUSIASTS	STABLE USERS	DABBLERS	FLYBYS	NON-ENGAGED
% OF AUDIENCE	2.0%	4.0%	6.9%	12.2%	44.0%	30.9%
ALL USERS	89,978	181,331	310,245	549,557	1,979,735	1,392,588
PROPENSITY TO SUBSCRIBE	0.200%	0.067%	0.033%	0.017%	0.008%	0.000%
CONVERSIONS FROM METER	169	91	53	15	0	0
ADV REV PER PAGE	\$0.022	\$0.022	\$0.022	\$0.025	\$0.025	\$0.015
MISCATEGORIZED USER PCT	0.05%	0.05%	0.20%	0.8%	25.0%	n/a
MISCATEGORIZED USER NUM	45	91	620	4,396	494,934	n/a
CONV RATE OF MISCATEGORIZED USERS	0.04%	0.04%	0.04%	0.04%	0.04%	n/a
CONV OF MISCATEGORIZED USERS	0.0	0.0	0.3	2	217	n/a
TOTAL CONVERSIONS	169	91	53	17	217	

## DYNAMIC PAYWALL RECOMMENDATION

Mather recommends a rainbow-like pattern of access, with a tight paywall on the ends of the engagement spectrum and more content offered to the medium-engaged user segments.

#### <u>Sample\*</u> recommendations by Audience Segment

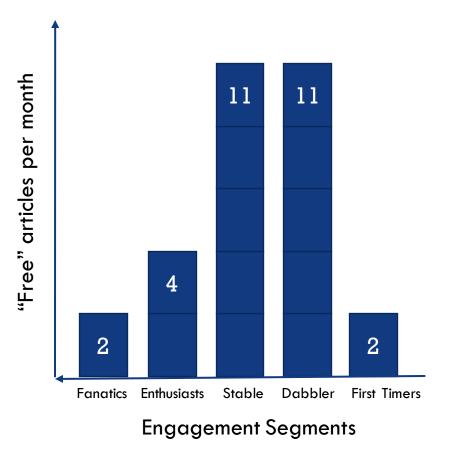
- Fanatics: 2 articles
- Enthusiasts: 4 articles
- Repeat Low-Engagement (groups 1-4): 11 articles
- First-Time Users: 2 articles
- \* Note: these results will differ by product



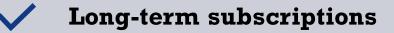
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Read Mather's White Paper Research highlights 7 digital subscription best practices



#### TACTICAL RECOMMENDATIONS



**Extended promotional terms** 

Increase the share of premium content



Adopt an organizational structure to maximize digital subscriptions



**Reduce friction in the checkout process** 



ARVID TCHIVZHEL AUDIENCE ANALYTICS CUSTOMER ACQUISITION FEATURED MATT LINDSAY SUBSCRIPTION PRICING STRATEGY WHITE PAPER

User engagement, environment	t
are key inputs driving propensit	y to
subscribe (READ MORE)	

<u>Read Mather's White Paper</u> <u>User engagement, environment are</u> <u>key inputs driving propensity to</u> <u>subscribe</u> mather:

# Engagement Master Class



Reader Revenue MASTER CLASS ENGAGEMENT



September 2020

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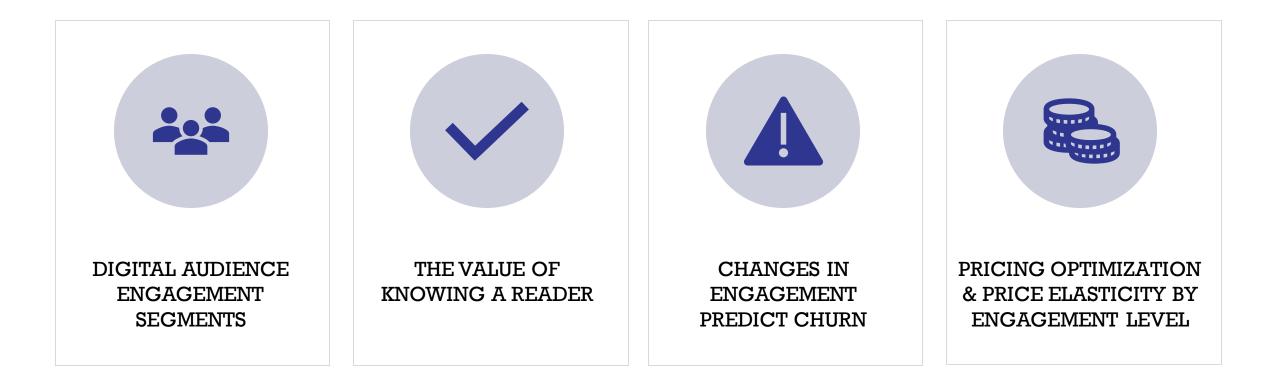
### DATA OVERVIEW - ENGAGEMENT

Publishers often leverage a composite digital engagement index, composed of five different variables measuring intensity, frequency, recency, and breadth of digital content consumption.

A composite index allows for use of **several different types** of **digital engagement** metrics **without negative effects** of **multicollinearity**.



#### CONCEPTS WE WANT TO SHARE TODAY

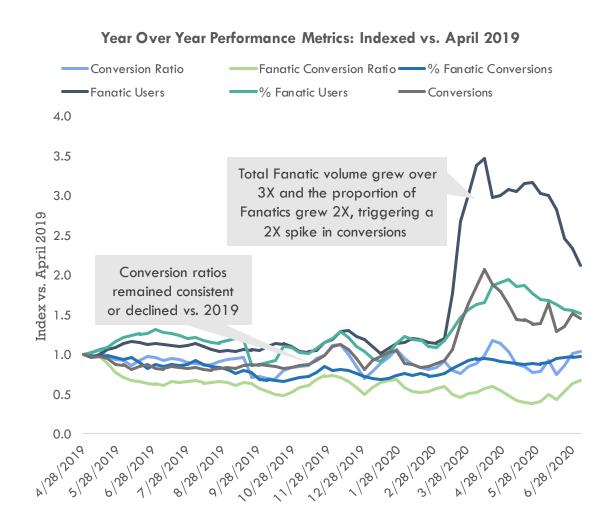




#### ENGAGED USERS ARE MUCH MORE VALUABLE

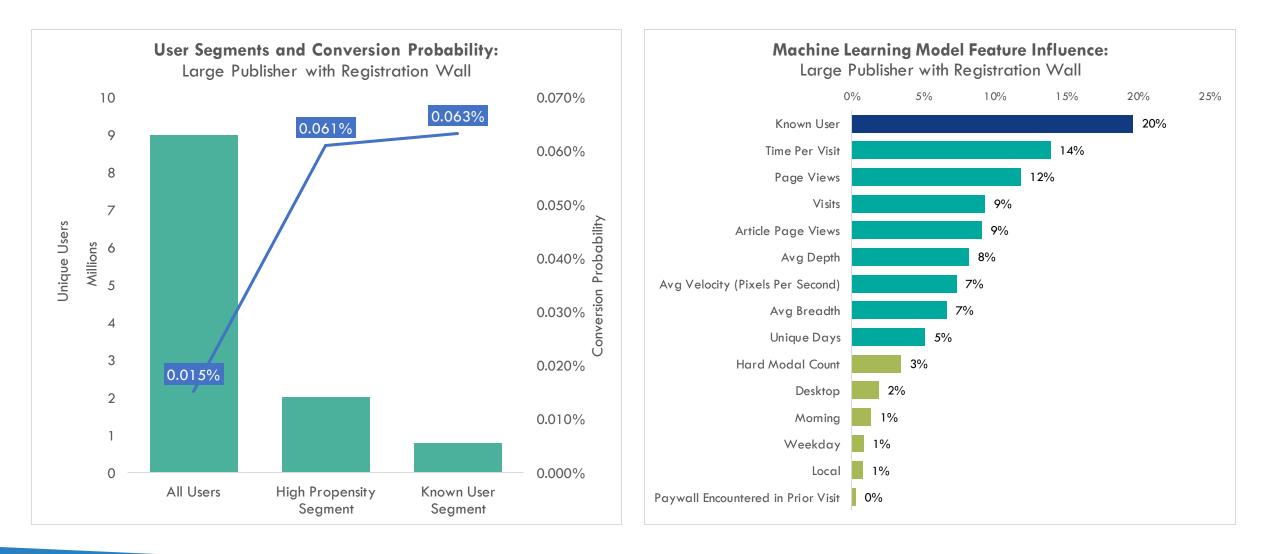
AVG. PER USER PER MONTH	FLYBYS	STABLE USERS	ENTHUSIASTS	FANATICS
ALL USERS	6.9M	595K	340K	167К
PAGEVIEWS	1.4	7.0	14.4	100.7
ARTICLE PAGEVIEWS	0.9	2.6	4.4	27.2
VISITS	1.1	2.6	5.0	26.2
TIME PER VISIT	02:17	06:57	07:40	06:41
SCROLL DEPTH	28%	50%	52%	62%
AD REVENUE	\$0.01	\$0.05	\$0.12	\$1.08
UNIQUE DAYS	1.1	2.1	3.6	9.5
% KNOWN USERS	0%	2%	5%	38%
CONVERSION RATE	0.00%	0.22%	0.28%	0.73%

### COVID-19 CONVERSIONS VS 2019 – CASE STUDY



- The growth in volume of Fanatic users is the primary driver of the spike in conversions observed during March June 2020.
- Fanatic volume grew over 3X and the proportion of total Fanatics grew by 2X, impacting total conversions 2X vs. 2019.
- The conversion ratio for all users (0.04%) stayed consistent while the Fanatic conversion ratio declined (1.4% in 2019; 0.77% in 2020).
- The proportion of Conversions from the Fanatic segment declined slightly YOY (64% in 2019; 58% in 2020).

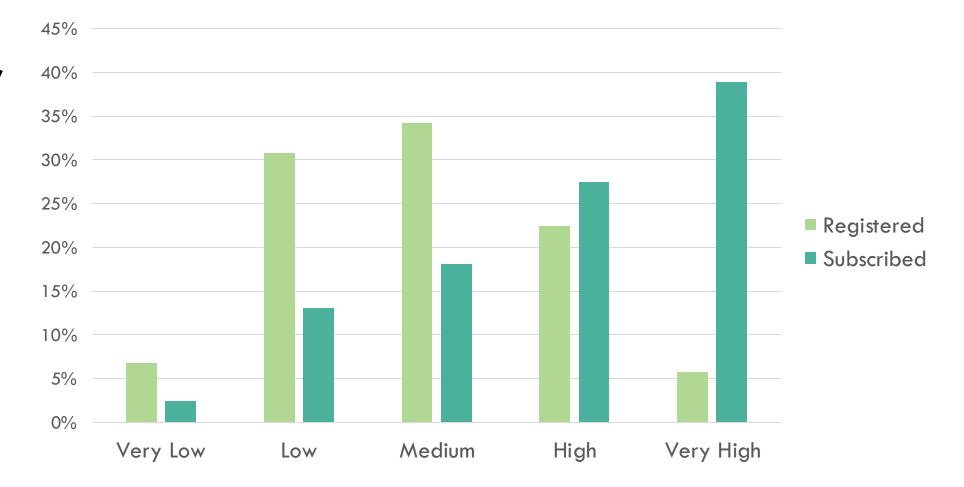
#### KNOWN READERS MUCH MORE LIKELY TO SUBSCRIBE



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#### **REGISTERED VS. SUBSCRIBED: ENGAGEMENT**

Registered users are moderately engaged, but **subscribed users** are **most engaged**.



## PRICING RECOMMENDATIONS

Mather recommends considering engagement during pricing decisions. You may consider excluding "sleepers" from price changes if they have zero engagement for long period of time

#### <u>Sample\*</u> pricing recommendations by Audience Segment

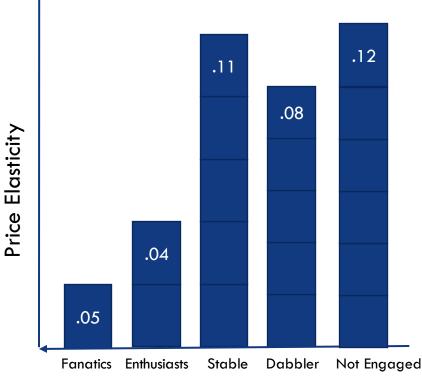
- Fanatics & Enthusiasts: Regular renewal price change
- Stable & Dabblers: Moderated renewal price change
- Not Engaged: No price increase
- \* Note: these results will differ by product



ANDIENCE ANALY ILES BLOG LOS IONER ACQUISTION CUSTOMER LIFETIME VALUE FEATURED MARKET BASED PRICING STRATEGY MATTHEW LULAY SUBSCRIPTION PRICING STRATEGY WHITE PAPER Digital Subscriber Price Optimization READ MORE

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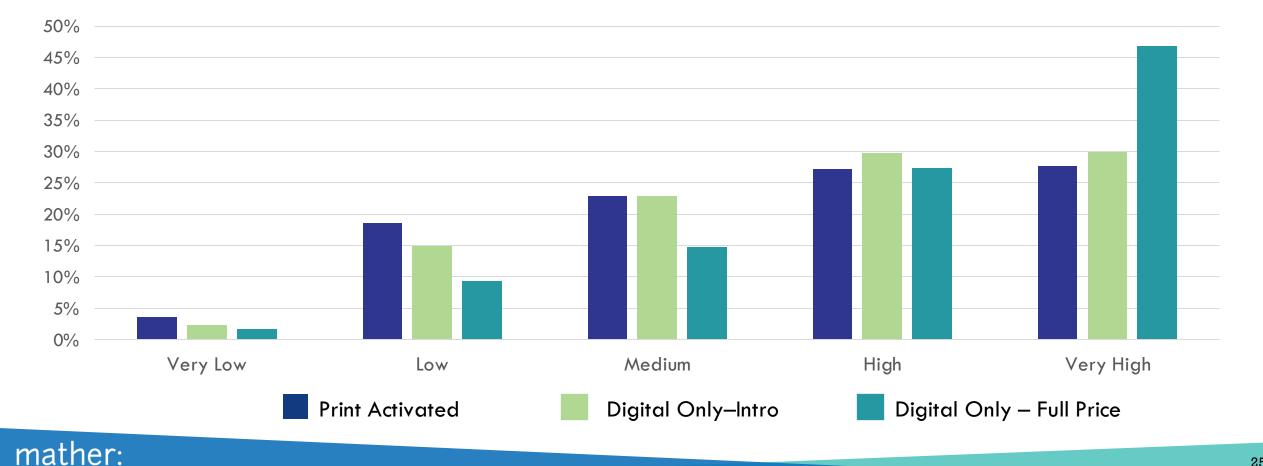
Read Mather's White Paper Digital Subscriber Price Optimization



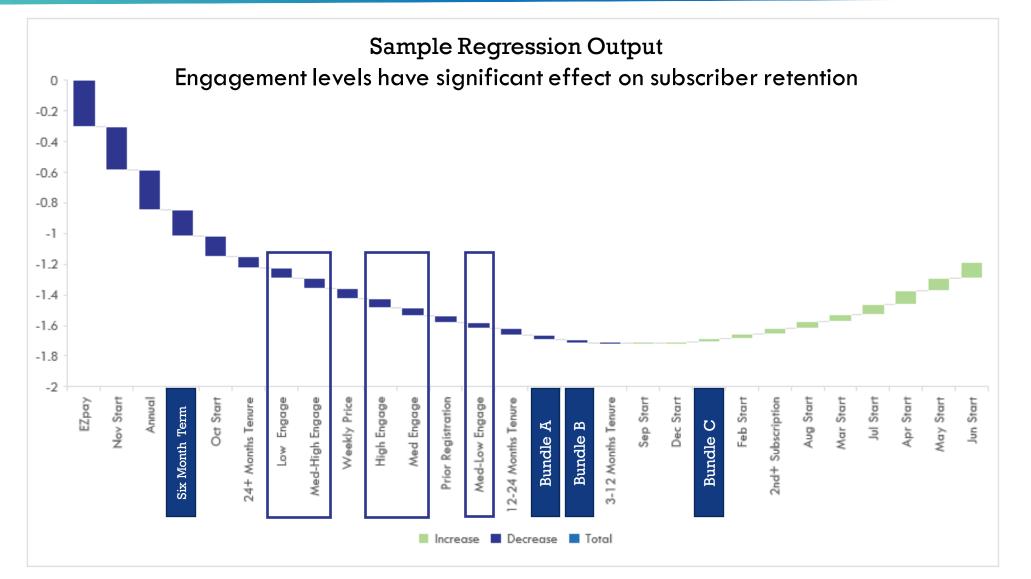
Engagement Segments

### DIGITAL ENGAGEMENT BY ITEM TYPE

Full price digital subscriptions tend to have the highest engagement, while print + digital and promotional digital-only subscriptions have lower.

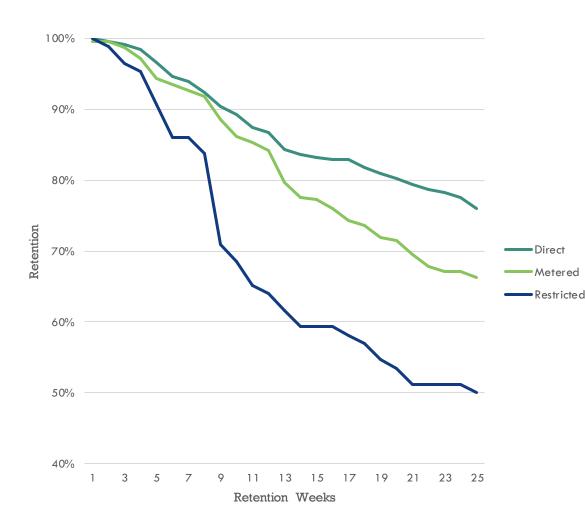


### CHURN MODEL RESULTS – ENGAGEMENT



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### ENGAGEMENT AFFECTS RETENTION



Sales channels attract customers with different levels of engagement:

- **Direct sales** to customers that go to the subscription page directly are most engaged
- Metered customers have next highest engagement
- **Premium/restricted content sales** have the lowest engagement

**Retention** of these customers reflects their engagement levels at time of the subscription purchase.

**Challenge** – increase engagement following the sale, particularly those from premium content.

### TACTICAL RECOMMENDATIONS



Convert anonymous visitors to known readers



Segment audience by engagement for acquisition and engagement



Consider engagement levels when adjusting subscription prices



Trigger retention campaigns when engagement falls below historical pattern



<u>Read Mather's White Paper</u> <u>User engagement, environment are</u> <u>key inputs driving propensity to</u> <u>subscribe</u>

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# Retention Master Class

RETENTION



Reader Revenue MASTER CLASS

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November 2020

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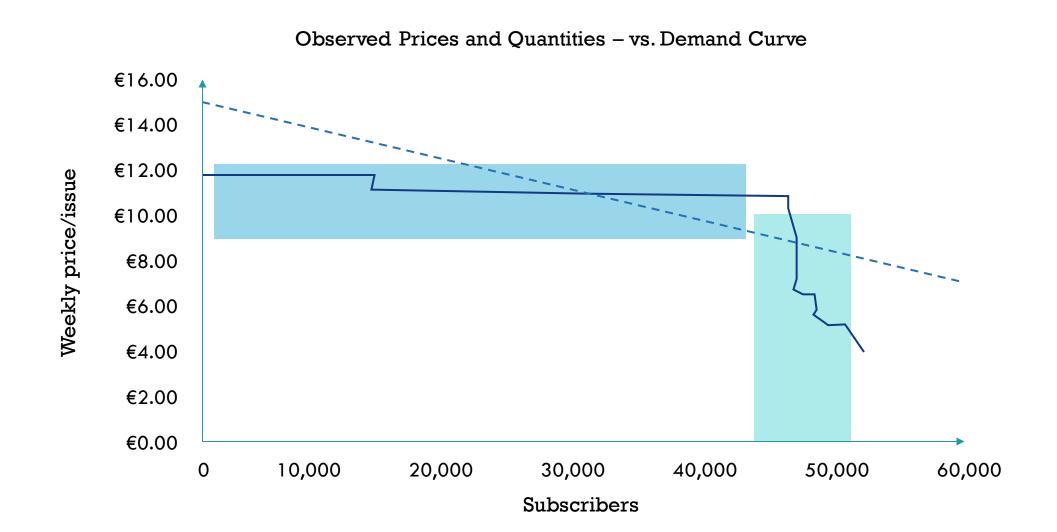
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#### **CONCEPTS WE WANT TO SHARE TODAY**







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#### **RENEWAL PRICE ELASTICITY**

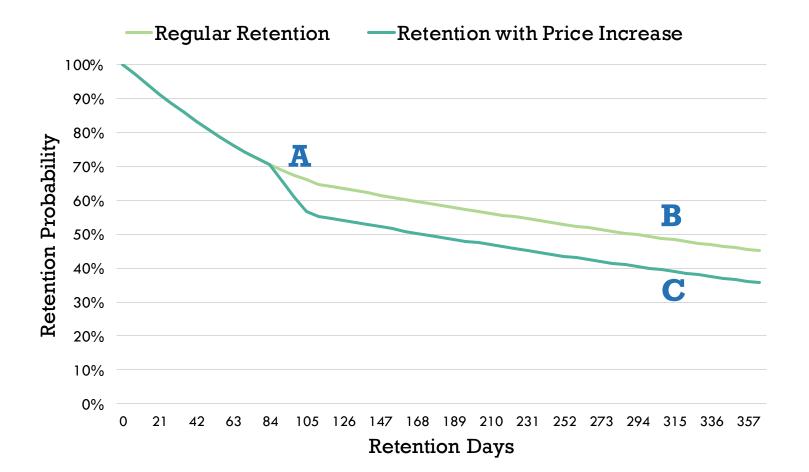
Elasticity = % (change in quantity) / % (change in price)

- Assume 5,000 active subscribers
- Assume a 15% change in price
- Assume 250 subscribers stopped
- 250 / 5,000: 5% stops
- 5% / 15% = -0.33 elasticity

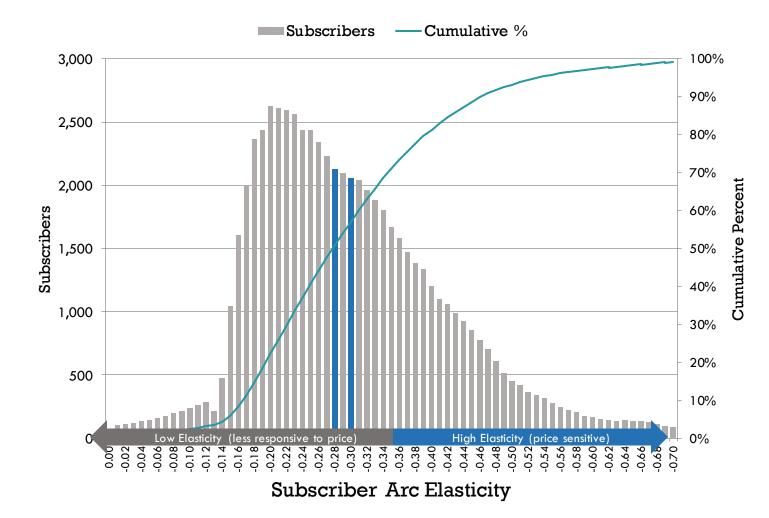
#### **RETENTION EXAMPLE**

Point A: Customer status prior to a renewal price increase

Point B vs. C: The expected retention probability per customer with and without a price increase



#### **RENEWAL PRICE ELASTICITY DISTRIBUTION**



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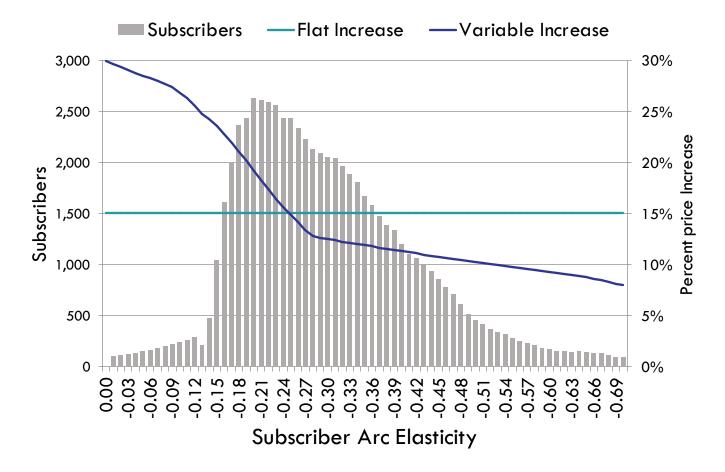
Each subscriber has an overall churn risk and price elasticity.

~-0.30 Mean Elasticity ~-0.28

**Median Elasticity** 

### ELASTICITY DRIVEN PRICE INCREASE

MBP applies a higher price increase on customers with lower price elasticity.



\*Average variable price increase is still 15%

#### Price elasticity differs greatly by tenure level.

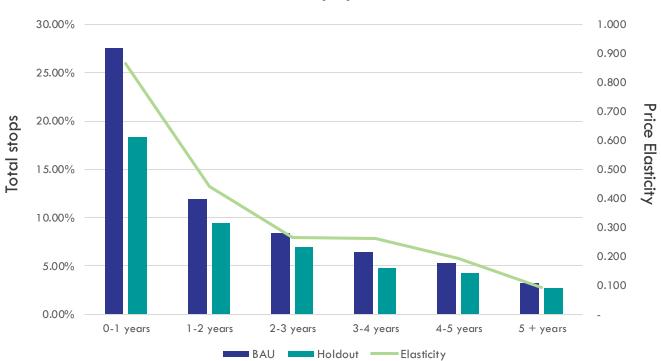
TENTURE YEAR	PRICE STOPS	PRICE ELASTICTIY
0-1	9.3%	-1.9
1-2	2.2%	-0.4
2-3	1.3%	-0.3
3-4	1.3%	-0.3
4-5	0.9%	-0.2
5-6	0.5%	-0.1

- BAU target subs received a renewal price increase
- Holdout subs received no increase

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• Differences in total stops due to price change

Similar findings are true with Digital Engagement, Income levels and Age groups.



#### Price Sensitivity by Tenure Level

MARKET BASED PRICING (MBP)

0.24 0.29 0.30 0.35

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0.72 0.65 0;68 0

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0,67

0.77

0,35 0,

.6

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0,32 0,30

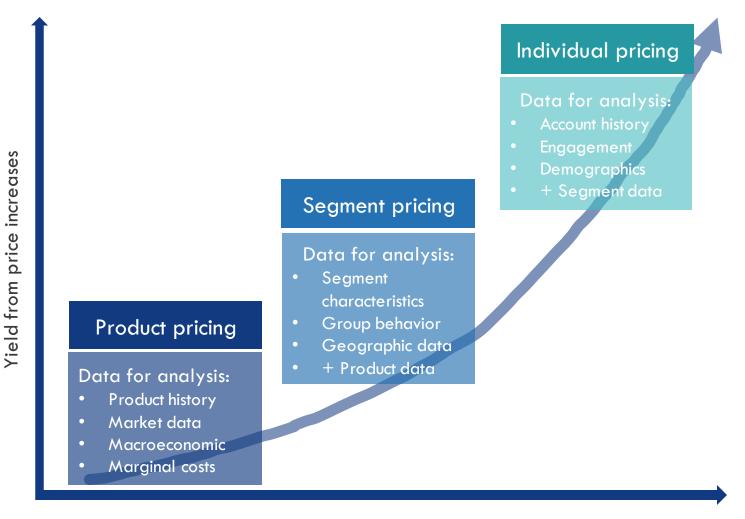
### MBP – APPLICATION OPTIONS

# Increasing pricing intelligence and flexibility increases yield.

Analytics can identify customers with high or low sensitivity to price

More accurate targeting improves performance and efficiency

Tradeoffs between complexity and yield can be measured

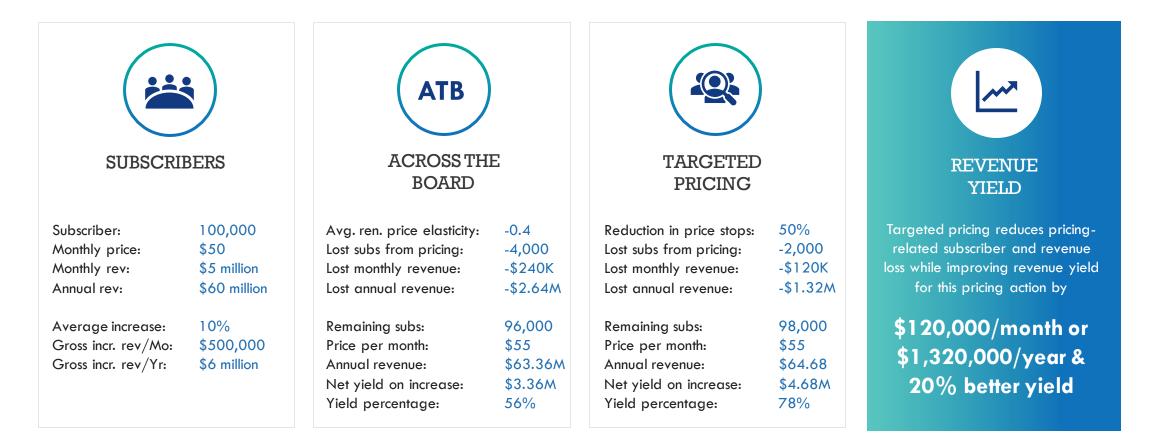


#### Price differentiation

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### VALUE PROPOSITION

The return on a targeted 10% price increase vs. an across-the-board 10% price increase to 100,000 subscribers:

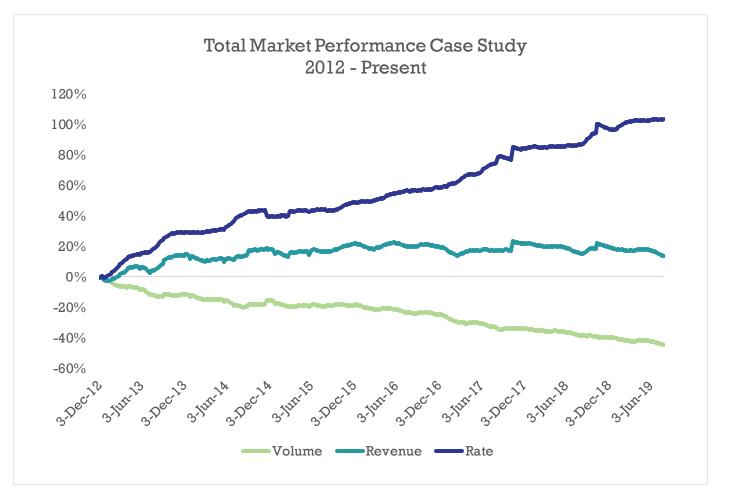


### LONG TERM REVENUE STABILITY

### Market Based Pricing helps to stabilize customer revenue over the long term

Declining customer volumes in disrupted services can be offset by targeted rate adjustments.

Revenue stabilization provides an extended runway to invest and grow new products.



# CHURN MODELING

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# ART & SCIENCE OF CHURN MODELING

Churn modeling calculates the likelihood that an individual will discontinue services due to a specific event.

Once we've answered **who** is likely to churn, the question then becomes **what** can be done about it?

Common characteristics of successful initiatives driven by churn scores:

- Personalized to individual customers
- Measured accurately (A/B tests, metrics reporting)
- Implemented soon after churn signal observed
- Authentic and effective messaging copy and creative



### SAMPLE CHURN MODEL RESULTS

A positive coefficient
indicates a contribution to
increased churn risk, while
a negative coefficient
indicates contribution to
decreased churn risk.

Base Variable	Variable Description	Variable	failure		Restricted failure	Unrestricted failure
	Weekly Price	wp	wp -0.0235*** -0.0281***		-0.0281***	
	Increase Amount	wpsp	wpsp		0.000469 0.00695***	
nonEZpay	Ezpay	_IEZpay_1	EZpay==1		-0.454***	-0.386***
Vol	DM	_lsource_2	source==DM		0.591***	0.502***
	EVENTS	_lsource_3	source==EVENTS		0.629***	0.565***
	FSI	_lsource_4	source==FSI		0.551***	0.465***
	OTM	_lsource_5	source==OTM		0.472***	0.368***
	OTHER	_lsource_6	source==Other		0.968***	0.817***
	TV	_lsource_7	source==TV		0.782***	0.706***
	WEB	_lsource_8	source==WEB		0.441***	0.436***
	WEB_NYTD	_lsource_9	source==WEB_NYTD		2.308***	1.943***
	WEB_Other	_lsource_10	source==WEB_Other		1.313***	1.281***
	WEB_PDSRCH	_lsource_11	source==WEB_PDSRCH		2.024***	1.730***
	WEB_REGIEMAIL	_lsource_12	source==WEB_REGIEMA	L	2.051***	1.639***
	WEB_SOCIAL	_lsource_13	source==WEB_SOCIAL		2.680***	2.408***
	Failures in the trailing 28	fail_last_28_1	fail_last_28_1			-0.000621***
	Starts in the trailing quarter	starts_last_q	starts_last_q			0.0000110***
	Individual avg Comps versus Zip avg	sub_zip_comp_28_2	sub_zip_comp_28_2			0.000481***
Dig Eng. Score =	1 Dig Eng. Score = 2	use_bucket==2	use_bucket==2		0.0435*	-0.264***
	Dig Eng. Score = 3	use_bucket==3	_ use_bucket==3		-0.254***	-0.316***
	Dig Eng. Score = 4	use_bucket==4	use bucket==4		-0.302***	-0.382***
	Dig Eng. Score = 5	use_bucket==5	use bucket==5		-0.324***	-0.408***
	Dig Eng. Score = 6	 use_bucket==6	use_bucket==6		-0.382***	-0.415***

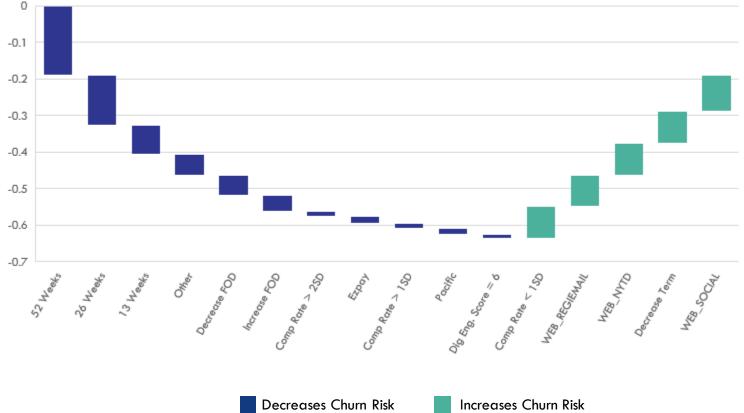
Churn risk decreases with increased subscription rates

Source==WEB show the highest churn risk, voluntary lowest

Greater number of starts in trailing quarter increases churn risk

> Churn risk decreases with higher levels of digital engagement

Variable Influence (Marginal Effects)



The chart shows the influence of individual variables on the churn score.

Out of all variables, the **52-week** term length has the largest contribution to decreasing churn risk, and the WEB\_SOCIAL start source is largest contribution to increasing churn risk.



### **CHURN SCORE TESTING & VALIDATION**

50% 45% 40% 35% 30% Stop Rate 25% 20% 15% 10% 5% 0% 16 21 26 31 36 51 56 61 66 71 76 81 86 91 96 11 Predicted Churn Score

Stop Rate by Predicted Churn Score

Actual stop rates are tracked, along with predicted risk, to validate the model.

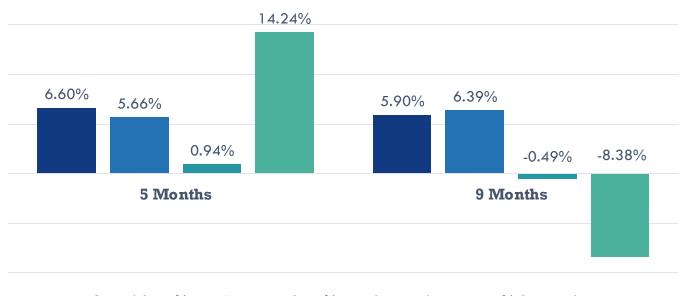
Stop rates often spike in the upper 10-20% of the Predicted Churn Score. 10-20% has a higher stop rate.

These pockets are often where the largest percentage reduction in churn rates can be obtained with application.

## CHURN CASE STUDIES



#### Retention Impact Gift Card



Control Stop % Treatment Stop % Stop Reduction % Stop Reduction

**Test:** \$10 gift card issued upon receipt of payment (high churn/high CLV, \$10.50/wk).

**Results:** Short lived positive impact on retention that disappears over several renewals.

**Insight:** Gifts do little to reinforce brand value on core subscribers.



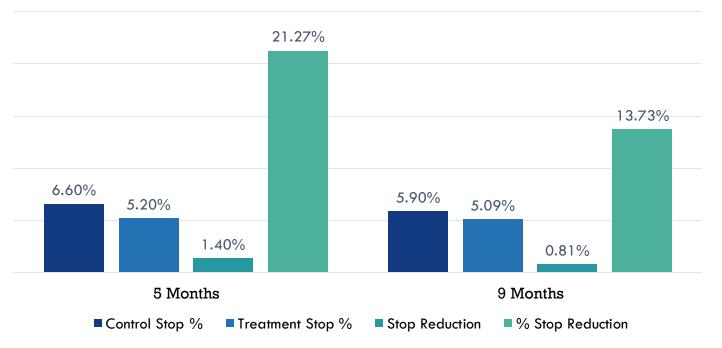
### **GREETING CARD CASE STUDY**

**Test:** Greeting card sent at time of expiration (high churn/high CLV - \$10.50/wk)

**Results:** Short and long term positive retention impact

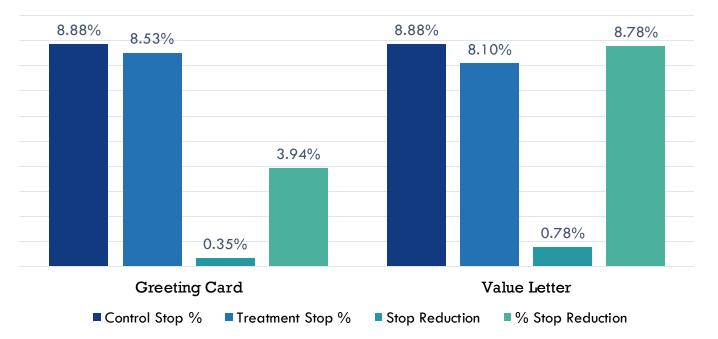
**Insight:** Messages that reinforce brand value have positive effects on core subs





### **GREETING CARD VS VALUE LETTER**

#### Retention Impact (Greeting Card vs. Value Letter)



**Test:** Greeting card or value letter sent at expire (high churn/mid CLV - \$3.75/wk)

**Results:** Both messages had positive retention impacts, value letter outperforms

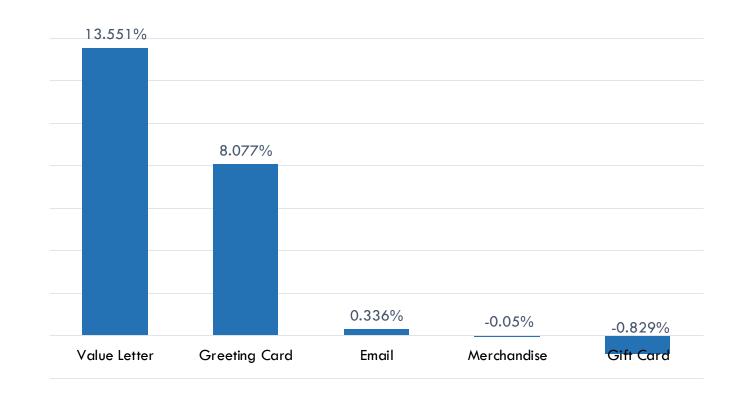
**Insight:** Highlighting importance of journalism reinforces value to subscriber



#### Aggregated Retention Impact by Incentive

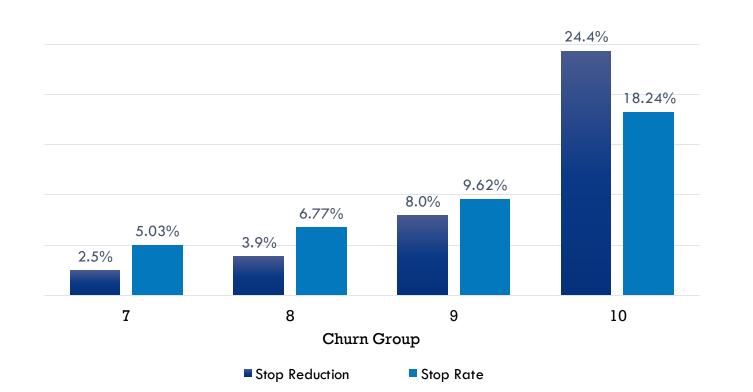
**Results:** Value letter and greeting cards showed the largest positive retention impact. Merchandise and gift cards did not improve retention

**Insight:** High Cost Incentives are not necessarily the most effective



### IMPACT BY CHURN GROUP

#### Aggregated Retention Impact by Churn Group

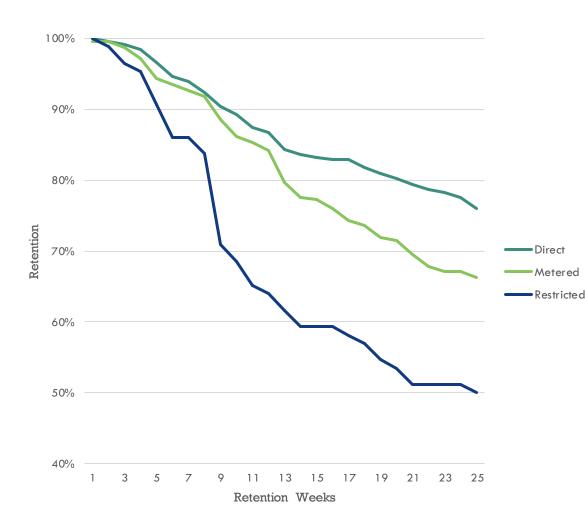


**Results:** Retention improvements positively correlated with churn risk

**Insight:** Highest ROIs observed on subs with highest estimated churn risk

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### ENGAGEMENT AFFECTS RETENTION



Sales channels attract customers with different levels of engagement:

- **Direct sales** to customers that go to the subscription page directly are most engaged
- Metered customers have next highest engagement
- **Premium/restricted content sales** have the lowest engagement

**Retention** of these customers reflects their engagement levels at time of the subscription purchase.

**Challenge** – increase engagement following the sale, particularly those from premium content.

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### ACCOLADES

<text>

By Matt Lindsay, President

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### Follow up questions?

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