SALT LAKE COUNTY
Debt Review Committee

Debt Review Committee Meeting – MINUTES (approved)
Wednesday, January 25, 2017, 2pm
Auditor's Office Conference Room N3-300 - Salt Lake County Government Center
2001 South State Street, Salt Lake City, Utah 84190

ATTENDEES

Committee Members Present:
Scott Tingley (Auditor), member, chair
Jon Bronson (Zion's Bank), ex-officio member
Darrin Casper (Mayor's Finance), member
Ralph Chamness (District Attorney), member
K. Wayne Cushing (Treasurer), member
David Delquadro (County Council), member
Javaid Majid (Mayor's Finance), member

Committee Members Absent:
Cherylann Johnson (Auditor)
Jason Rose (County Council)

Other Attendees:
Mike Bailey (Information Services)
Shanell Beecher (Mayor's Finance)
Cory Hess (Information Services)
Javaid Lal (Information Services)
Phu Le (Information Services)
Jana Ostler (Auditor)
Beth Overhuls (Information Services
John Pectol (Mayor's Finance)
Cherie Root (Information Services)
Craig Wangsgard (District Attorney)

AGENDA ITEMS
The meeting was called to order by Chairman Tingley at 2:04pm.

1. **Public comment**

Scott Tingley read a comment submitted via email by Steve Van Maren. Mr. Van Maren requested that committee members disclose any stock ownership they may have in the companies involved in contracts being discussed. Ralph Chamness reminded the committee that this is a practice already prescribed by policy.

2. **Approval of minutes – October 26, 2016**

Dave Delquadro moved to approve the minutes of the October 26, 2016 meeting as written. The motion was seconded and the vote to approve was unanimous.

3. **Approval of minutes – January 11, 2017**

Jon Bronson submitted a few minor changes to the minutes of January 11, 2017. Wayne Cushing moved to approve the minutes of the January 11, 2017 meeting as written with the changes suggested by Jon Bronson. Dave Delquadro seconded the motion and the vote to approve was unanimous.

4. **Open Meetings Act Training with Craig Wangsgard**

This agenda item was moved to after the review of the Information Services financing contracts. Open Meetings Act Training was postponed until the February meeting due to unavailability of the presentation materials. Craig Wangsgard reminded everyone that all are required to submit yearly disclosure forms disclosing any possible conflicts of interest.

5. **Review of Information Services financing contracts**

Darrin Casper presented the issue that Information Services, as well as other agencies in the county, have numerous tech service agreements which often extend for multiple years in duration. Normally these would not fall under the purview of the Debt Review Committee (DRC), but there is some ambiguity in policy about what should or should not come to the DRC. For example, People soft is a multiyear agreement, but it is not a debt. However, in some cases, particularly with the IS contract with Cisco in question today, the agreement changed from being a maintenance agreement to look more like a debt. Upon further examination, other contracts may have similar problems. Because of the debt-like nature of these contracts, they should have been brought to the DRC for review. It is suggested that until there is more clarification in policy regarding this type of agreement, all such multiyear agreements, especially if they involve interest rates or possible defaults in payment as a result of non-appropriation, should be brought before the DRC for review. According to Accounting Department, reviewing all such agreements and leases could be a major undertaking for the DRC.

Jon Bronson and Craig Wangsgard explained that a municipal debt instrument must have a non-funding clause in it, making it subject to annual appropriations, in order for the debt to be lawful in Utah. In the case of the Cisco/Key Bank contract, there was a non-funding clause in the original Cisco contract and then Cisco sold the contract to Key Bank. The non-funding clause is missing from the Key Bank contract. The 2016 payment has been made and the 2017 payment has been budgeted, but as it stands, the 2018 payment is unlawful at this point. Either the contract needs to be renegotiated or reworded to include a non-funding clause, or Dave Delquadro suggested the 2018 payment amount could be appropriated this year, then budgeted this year, and the payment made in 2018. We can appropriate this year for 2018 and bind the council if there is a legal basis for the money being set aside. The argument can also be made that there is an economic benefit to setting the money aside now, because we get a discount by honoring the 3-year contract. Jon Bronson stated that unlawful debt exists throughout the state due to mistakes in lending practices, and that if this contract were challenged, the County would not lose anything. There was agreement, however, that we would like to hold ourselves to a higher standard by fixing this contract situation.

Darrin Casper reiterated that we need to clarify the policy regarding what needs to come before the DRC to avoid future problems. Whether a contract has a non-funding clause is not the only issue. There are contracts containing non-funding clauses that clearly need to be reviewed by the DRC according to policy as it is written. What are the criteria that trigger a review by the DRC? Jon Bronson suggested that if a debt/contract requires a resolution by the council, it should come to the DRC first. Discussion regarding accounting standards acknowledged that there is a difference between accounting standards and bond counsel, and those differences can make it unclear which contracts meet the criteria needed to come before the DRC. Jon Bronson suggested that he and Craig Wangsgard talk with the bond attorneys to find out what needs to go before the Council.

Darrin Casper made a motion to have the District Attorney's Office review these loans and/or leases, at least the three that have been the topic of our discussion today, to determine what steps are necessary to rectify any problem that might have risen from them, understanding that we have entered into them in good faith with the County's best interest in mind, and that we probably want to honor the contracts, and that we value the maintenance in the principal subject of our discussion.

Dave Delquadro requested the addition of a friendly amendment to the motion indicating that the subject should be brought back to the DRC for next month's meeting. Darrin Casper agreed to the amendment. Javaid Majid seconded the motion and the motion passed unanimously.

6. **Review draft calendars for upcoming bond/note transactions**

Jon Bronson presented draft calendars for General Obligation Bonds, Series 2017; Sale Tax Revenue (TRCC) Bonds, series 2017; and Tax and Revenue Anticipation Notes, Series 2017. Both the General Obligation Bonds and the TRCC Bonds will be discussed at the next regularly scheduled DRC meeting on February 22, 2017. Underwriter Selection Committee for TRCC Bonds will be chosen from DRC membership at the next regularly scheduled meeting. Wayne Cushing requested that the calendar for the Tax and Revenue Anticipation Notes be moved up by one month. Darrin Casper indicated that the schedule change would work.

Jon Bronson gave a brief update on the progress of the Sales Tax Revenue Bonds. We are waiting for ratings. Final amounts, as affected by potential allocation from New Market Tax Credit, were discussed.

7. **Financial Advisor updates**

Jon Bronson presented Municipal Market Outlook (handout), Zion's Bank Economic Snapshot (handout), Piper Jaffray Capital Markets Update (handout), J.P. Morgan Market Update for Municipal Issuers (handout). Rates are heading up gradually. The Amazon deal with State of Utah is going to be beneficial, but numbers are still unclear. Trump administration policies are beginning to have some effect on markets. Campaign rhetoric and recent executive orders will impact regulation, infrastructure building, strength of the dollar, Public Private Partnerships, and the overall economy.

Jon Bronson reviewed legislation affecting the County. HB 26 amends the definition of locally assessed new growth and Darrin Casper says it will have a negative fiscal impact from the Council's legislative intent. HB 32 deals with assessment area for economic promotion. HB 45 would affect centrally assessed properties (watch this one). HB 55 expands the open meetings law (watch this one). HB 135 amends the time frame for making deposits. SB 16 gives a sales tax exemption to car washes. SB 23 gives a sales tax exemption for hunting guides or outfitting services. SB 43 deals with special purpose property that is not currently being used for its specialty use. SB 69 affects the timing of ballot propositions. SB 83 deals with online sales tax collection. SB 93 affects the Auditor's Notice of Valuation. Auditors are opposed to this bill. SB 94 affects certain districts (formerly "special districts") without all-elected boards. Deidre Henderson is also proposing a bill to mandate a language change to show the true cost of bonds. The State Auditor's audit of the League of Cities is probably going to generate more legislation focusing on oversite.

8. **Other**

No other business.

Javaid Majid moved to adjourn, the motion was seconded by Wayne Cushing, all were in favor, and the meeting adjourned at 4:00 pm.

Calendar of Events

Salt Lake County, Utah
General Obligation Bonds, Series 2017

$45,000,000*

as of January 23, 2017

January 2017

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

February 2017

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			1	2	3	4
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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28				

March 2017

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			1	2	3	4
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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Day	Date	Event	Responsibility
Wednesday	January 25	Draft Calendar of Events is distributed to working group.	MA
Monday	February 6	Bond Counsel is selected by DA's office.	DA
Wednesday	February 15	Bond Counsel distributes draft Parameters Resolution to the working group.	BC
Wednesday	February 22	Regular DRC Meeting –discuss calendar, structure, distribution list, parameters, etc. (2:00 p.m. – location TBD)	DRC, DDA, MA, BC
Wednesday	March 1	Parameters Resolution is placed on Council Agenda for March 7th meeting.	BC, CL
Tuesday	March 7	County Council Meeting to consider Adoption of Parameters Resolution. (Council Chambers – 4:00 p.m.).	ALL
Monday	March 13	"Notice of Bonds to be Issued and Public Hearing" is published in *The Salt Lake Tribune* and *The Deseret News*.	BC
Monday	March 20	Second publication of the "Notice of Bonds to be Issued and Public Hearing" in *The Salt Lake Tribune* and *The Deseret News*. (Begins 30-day contest period.)	BC
Tuesday	April 4	Public Hearing during regular Council meeting. (Council Chambers - 4:00 p.m.)	CC, FA, BC
Monday	April 17	Draft Preliminary Official Statement is distributed to the working group for review.	MA
Thursday	April 20	30-day contest period expires.	NA
Wednesday	April 26	Due Diligence meeting to review POS. (2:00 pm – Utah time)	DRC, BC, MA

* Preliminary; subject to change

April 2017

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						1
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23	24	25	26	27	28	29
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May 2017

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21	22	23	24	25	26	27
28	29	30	31			

June 2017

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11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Day	Date	Event	Responsibility
Tuesday	May 2	Revised POS is distributed to working group.	MA
Tuesday	May 2	Rating package is sent to rating agencies.	MA
Friday	May 5	Rating rehearsal meeting. (2:00 pm – Darrin Casper's office)	By Invitation
Week of	May 8	Rating presentations in San Francisco (11th & 12th)	By Invitation
Friday	May 19	Receive ratings.	MA
Friday	May 19	POS distributed to the market.	MA
Wednesday	May 31	Competitive Bond Sale - 9:30 am (Office of Zions Public Finance).	DRC, MA
Wednesday	May 31	Award by delegated authority. (No later than 2:30 p.m.)	CFO
Wednesday	June 7	Bond Counsel distributes draft final bond documents.	BC
Monday	June 12	Pre-closing (Time and location TBD)	By Invitation
Wednesday	June 28	Bond closing; delivery of bond proceeds. (Offices of Bond Counsel – 9:00 a.m.)	ALL

LEGEND

AU	County Auditor	Scott Tingley
BC	Bond Counsel	Chapman and Cutler, LLP
CC	County Council	Steve DeBry, Chair
CFO	Chief Financial Officer	Darrin Casper
CL	County Clerk	Sherrie Swensen
COO	Chief Operating Officer	Lori Bayes
CT	County Treasurer	Wayne Cushing
DDA	Deputy District Attorney	Ralph Chamness, Craig Wangsgard
DRC	Debt Review Committee	Scott Tingley, Chair
FA	Financial Advisor	Zions Public Finance
M	Mayor	Ben McAdams
U	Underwriters	TBD

Calendar of Events

Salt Lake County, Utah
Sale Tax Revenue (TRCC) Bonds, Series 2017

$52,000,000*

as of January 23, 2017

January 2017

S	M	T	W	T	F	S
1	2	3	4	5	6	7
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22	23	24	25	26	27	28
29	30	31				

February 2017

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March 2017

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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Day	Date	Event	Responsibility
Wednesday	January 25	Draft Calendar of Events is distributed to working group.	MA
Monday	February 6	Bond Counsel is selected by DA's office.	DA
Monday	February 13	Procurement Office distributes Underwriter RFP.	PO, MA
Wednesday	February 15	Bond Counsel distributes draft Parameters Resolution to the working group.	BC
Wednesday	February 22	Regular DRC Meeting –discuss calendar, structure, distribution list, parameters, etc. (2:00 p.m. – location TBD)	DRC, DDA, MA, BC
Wednesday	March 1	Proposals from Underwriters are due. (4:00 pm)	U, PO
Wednesday	March 1	Parameters Resolution is placed on Council Agenda for March 7th meeting.	BC, CL
Tuesday	March 7	County Council Meeting to consider Adoption of Parameters Resolution. (Council Chambers – 4:00 p.m.).	ALL
Monday	March 13	"Notice of Bonds to be Issued and Public Hearing" is published in *The Salt Lake Tribune* and *The Deseret News*.	BC
Wednesday	March 15	Underwriter selection committee meets to score underwriter proposals and select underwriter. (3:00 pm – County Offices)	By Invitation
Monday	March 20	Second publication of the "Notice of Bonds to be Issued and Public Hearing" in *The Salt Lake Tribune* and *The Deseret News*. (Begins 30-day contest period.)	BC
Tuesday	April 4	Public Hearing during regular Council meeting. (Council Chambers - 4:00 p.m.)	CC, FA, BC

* Preliminary; subject to change

April 2017

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May 2017

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21	22	23	24	25	26	27
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June 2017

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18	19	20	21	22	23	24
25	26	27	28	29	30	

Day	Date	Event	Responsibility
Monday	April 17	Draft Preliminary Official Statement is distributed to the working group for review.	MA
Thursday	April 20	30-day contest period expires.	NA
Wednesday	April 26	Due Diligence meeting to review POS (3:00 pm – Utah time).	MA
Tuesday	May 2	Revised POS is distributed to working group.	MA
Tuesday	May 2	Rating package is sent to rating agencies.	MA
Friday	May 5	Rating rehearsal meeting. (2:00 pm – Darrin Casper's office)	By Invitation
Week of	May 8	Rating presentations in San Francisco (11th & 12th)	By Invitation
Friday	May 19	Receive ratings.	MA
Monday	May 22	POS distributed to the underwriter.	MA
Wednesday	June 14	Pre-Pricing call. (2:30 pm)	By Invitation
Thursday	June 15	Bond Pricing.	All
Thursday	June 15	Award by delegated authority. (No later than 2:30 p.m.)	CFO
Thursday	June 22	Final Official Statement is delivered to the Underwriter.	MA
Thursday	June 22	Bond Counsel distributes draft final bond documents.	BC
Wednesday	June 28	Pre-closing (Time and location TBD)	By Invitation
Wednesday	July 5	Bond closing; delivery of bond proceeds. (Offices of Bond Counsel – 9:00 a.m.)	ALL

LEGEND

AU	County Auditor	Scott Tingley
BC	Bond Counsel	Chapman and Cutler, LLP
CC	County Council	Steve DeBry, Chair
CFO	Chief Financial Officer	Darrin Casper
CL	County Clerk	Sherrie Swensen
COO	Chief Operating Officer	Lori Bayes
CT	County Treasurer	Wayne Cushing
DDA	Deputy District Attorney	Ralph Chamness, Craig Wangsgard
DRC	Debt Review Committee	Scott Tingley, Chair
FA	Financial Advisor	Zions Public Finance
M	Mayor	Ben McAdams
U	Underwriters	TBD

Salt Lake County, Utah
Tax and Revenue Anticipation Notes, Series 2017

Calendar of Events
$45,000,000*
as of January 24, 2017

ZB PF

May 2017

S	M	T	W	T	F	S
	1	2	3	4	5	6
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21	22	23	24	25	26	27
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June 2017

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July 2017

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Day	Date	Event	Responsibility
Monday	May 15	Note Counsel is selected by DA's office.	DA
Thursday	May 25	Calendar of Events is distributed.	DRC, MA
Wednesday	May 31	Plan of Finance is presented to DRC.	DRC, MA
Friday	June 30	Cash flow projections are prepared and the size of the Tax Notes is determined.	MA, DRC
Wednesday	July 5	Plan of Finance with delegated authority is placed on County Council Agenda for July 11th meeting.	NC, CL
Wednesday	July 5	Draft Preliminary Official Statement is distributed to the working group.	MA
Tuesday	July 11	County Council adopts Plan of Finance document with delegated authority.	CC, NC, MA
Wednesday	July 12	Due diligence meeting. (2:00 p.m. – County Offices)	DRC, NC, MA
Friday	July 14	Rating package is sent to Moody's	MA
Week of	July 17	Rating call with Moody's (2:00 pm – Darrin Casper's Office)	By Invitation
Monday	July 31	Rating is received.	MA
Tuesday	August 1	Revised POS is distributed to the market.	MA
Thursday	August 10	Competitive Sale. (9:30 am – Offices of Zions Public Finance)	DRC, U, MA
Thursday	August 10	Award made via delegated authority – (by 2:00 p.m.)	CFO, NC, MA

June 2017

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July 2017

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August 2017

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20	21	22	23	24	25	26
27	28	29	30	31		

Day	Date	Event	Responsibility
Monday	August 14	Draft Closing documents are distributed by Note Counsel.	NC
Monday	August 14	Final Official Statement is distributed.	MA
Monday	August 21	Pre-closing. (Time and place TBD)	By Invitation
Thursday	August 24	Closing. (Offices of Note Counsel – 9:00 a.m.)	All

LEGEND

AU	County Auditor	Scott Tingley
CC	County Council	Salt Lake County Council Members
CL	County Clerk	Sherrie Swensen
CT	County Treasurer	K. Wayne Cushing
DRC	County Debt Review Committee	Scott Tingley (Chair), Wayne Cushing, Darrin Casper, Ralph Chamness, David Delquadro, Jason Rose, Cherylann Johnson, Javaid Majid
FA	Financial Advisor	Zions Bank Public Finance
MA	Mayor's Staff	Shanell Beecher, Rod Kitchens, John Pectol
NC	Note Counsel	TBD
U	Underwriter	TBD

Municipal Market Outlook

January 19, 2017

RATE DATA	Today	Week Prior	Month Prior	Year Prior
MMD AAA GO				
3 Year	1.23	1.32	0.59	0.88
5 Year	1.55	1.63	0.85	1.37
10 Year	2.17	2.19	1.41	2.19
15 Year	2.55	2.56	1.77	2.65
20 Year	2.79	2.80	2.02	2.90
30 Year	2.92	2.92	2.15	3.13
US Treasury				
2 Year	1.23	1.20	1.29	0.85
5 Year	1.93	1.89	2.10	1.44
10 Year	2.42	2.38	2.60	2.01
30 Year	3.00	2.96	3.16	2.77
Federal Funds	0.66	0.66	0.66	0.37
Prime Rate	3.75	3.75	3.75	3.50
SIFMA 7 Day	0.66	0.67	0.73	0.01

BOND BUYER AND SHORT TERM INDEXES				
20 Bond GO[1]	3.83	3.72	3.88	3.37
25 Bond REV[2]	3.96	3.83	3.99	3.76
Jefferies ST	0.65	0.63	0.46	0.01

[1]GO bonds maturing in 20 years, avg. rating equivalent to Moody's Aa2 & S&P's AA

[2]Revenue bonds maturing in 30 years, avg. rating equivalent to Moody's A1 & S&P A+

ZIONS PUBLIC FINANCE – MMD Muni Bond Yields – 01/24/2017 EOD

		General Obligations						"AAA" Coupon Range	
		"AAA"	PRE-RE	INSURED	"AA"	"A"	"BAA"	"LOW"	"HIGH"
1	2018	0.90	0.92	1.00	0.92	1.09	1.36	5.00	5.00
2	2019	1.09	1.12	1.29	1.15	1.37	1.67	5.00	5.00
3	2020	1.29	1.33	1.52	1.37	1.62	1.94	5.00	5.00
4	2021	1.46	1.50	1.75	1.56	1.84	2.16	5.00	5.00
5	2022	1.66	1.71	1.99	1.78	2.08	2.39	5.00	5.00
6	2023	1.84	1.89	2.20	1.98	2.29	2.63	5.00	5.00
7	2024	2.00	2.06	2.42	2.16	2.51	2.83	5.00	5.00
8	2025	2.12	2.18	2.57	2.30	2.66	3.00	5.00	5.00
9	2026	2.23		2.72	2.43	2.81	3.16	5.00	5.00
10	2027	2.32		2.83	2.53	2.92	3.28	5.00	5.00
11	2028	2.40		2.93	2.62	3.02	3.39	5.00	5.00
12	2029	2.48		3.02	2.71	3.11	3.48	5.00	5.00
13	2030	2.57		3.12	2.81	3.21	3.58	5.00	5.00
14	2031	2.65		3.20	2.90	3.29	3.66	5.00	5.00
15	2032	2.71		3.26	2.96	3.35	3.72	5.00	5.00
16	2033	2.77		3.32	3.02	3.41	3.78	5.00	5.00
17	2034	2.83		3.38	3.08	3.47	3.83	5.00	5.00
18	2035	2.88		3.41	3.13	3.51	3.87	5.00	5.00
19	2036	2.92		3.45	3.17	3.55	3.91	5.00	5.00
20	2037	2.95		3.47	3.20	3.58	3.94	5.00	5.00
21	2038	2.96		3.48	3.21	3.59	3.95	5.00	5.00
22	2039	2.97		3.49	3.22	3.60	3.96	5.00	5.00
23	2040	2.98		3.50	3.23	3.61	3.97	5.00	5.00
24	2041	2.99		3.51	3.24	3.62	3.98	5.00	5.00
25	2042	3.00		3.52	3.25	3.63	3.99	5.00	5.00
26	2043	3.01		3.53	3.26	3.64	4.00	5.00	5.00
27	2044	3.02		3.54	3.27	3.65	4.01	5.00	5.00
28	2045	3.03		3.55	3.28	3.66	4.02	5.00	5.00
29	2046	3.04		3.56	3.29	3.67	4.03	5.00	5.00
30	2047	3.05		3.57	3.30	3.68	4.04	5.00	5.00

Interpolated AAA Yields

		12 Mo	13 Mo	14 Mo	15 Mo	16 Mo	17 Mo	18 Mo	19 Mo	20 Mo	21 Mo	22 Mo	23 Mo
Yr	Mat	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2018	0.90	0.91	0.92	0.94	0.95	0.96	0.98	0.99	1.01	1.03	1.04	1.06
2	2019	1.09	1.11	1.12	1.14	1.15	1.17	1.19	1.20	1.22	1.23	1.25	1.26
3	2020	1.29	1.30	1.32	1.33	1.35	1.36	1.37	1.38	1.40	1.41	1.42	1.43
4	2021	1.46	1.47	1.49	1.50	1.52	1.53	1.54	1.56	1.57	1.58	1.60	1.61
5	2022	1.66	1.67	1.68	1.70	1.71	1.72	1.73	1.74	1.75	1.76	1.77	1.78
6	2023	1.84	1.85	1.86	1.88	1.89	1.90	1.91	1.92	1.94	1.95	1.96	1.97
7	2024	2.00	2.01	2.02	2.03	2.04	2.05	2.06	2.07	2.08	2.08	2.09	2.10
8	2025	2.12	2.13	2.14	2.14	2.15	2.16	2.17	2.18	2.19	2.20	2.21	2.22
9	2026	2.23	2.24	2.25	2.25	2.26	2.27	2.28	2.28	2.29	2.30	2.30	2.31
10	2027	2.32	2.33	2.33	2.34	2.34	2.35	2.36	2.36	2.37	2.38	2.38	2.39
11	2028	2.40	2.41	2.41	2.42	2.42	2.43	2.44	2.44	2.45	2.45	2.46	2.46
12	2029	2.48	2.49	2.49	2.50	2.50	2.51	2.52	2.52	2.53	2.53	2.54	2.54
13	2030	2.57	2.57	2.57	2.58	2.58	2.58	2.58	2.58	2.59	2.59	2.59	2.59

"AAA" Muni Yields as percent of US Treas Yields

		10/26/2016 to 01/24/2017				01/26/2016 to 01/24/2017			
Muni/Treas	CURR %	AVG %	# SD	MAX %	MIN %	AVG %	# SD	MAX %	MIN %
1 yr/1 yr	115.4	113.1	0.47	122.1	96.3	102.4	0.81	137.3	59.8
2 yr/2 yr	91.1	98.4	-1.53	109.0	86.3	87.9	0.27	109.9	65.1
3 yr/3 yr	86.7	94.4	-1.40	107.9	83.1	85.5	0.12	107.9	65.5
5 yr/5 yr	85.8	89.9	-0.79	104.4	80.2	82.4	0.46	104.4	65.7
7 yr/7 yr	88.3	88.5	-0.06	99.1	80.5	83.4	1.01	99.1	70.4
10yr/10yr	94	96.1	-0.52	106.9	89.9	93.5	0.11	106.9	85.1
15yr/10yr	109.8	112.8	-0.62	121.7	105.6	114.8	-0.94	129.8	103.7
20yr/10yr	119.5	123.7	-0.75	134.4	115.7	129.0	-1.50	146.9	115.7
30yr/10yr	123.5	130.1	-0.98	142.8	121.2	139.0	-1.75	163.4	121.2
15yr/30yr	88.7	87.3	0.41	95.3	79.7	81.1	1.45	95.3	69.7
20yr/30yr	96.6	95.8	0.25	103.6	88.3	91.1	1.16	103.6	79.2
30yr/30yr	99.8	100.6	-0.26	108.8	93.6	98.0	0.36	108.8	85.8

Market Commentary

- Longer dated UST yields ended the week higher on the back of positive U.S. economic data and hawkish Fed rhetoric[1,2]
  - December U.S. CPI data increased 0.2%, in line with the Street's consensus, while U.S. Housing Starts rose 11.3% in December versus the Street's expectations of a 9.0% increase[1]
    - Furthermore, the Fed's Beige Book reiterated inflation strength in the U.S., noting that "pricing pressures intensified somewhat" in the last few weeks of 2016[3]
  - On Wednesday, Fed Chair Yellen stated that she expects the FOMC to raise rates "a few times a year" through 2019[2]
  - Week over week, the UST curve steepened as the 2-year UST yield was unchanged, while the 10- and 30-year UST yields increased 9 and 7 bps, respectively
- The municipal market was challenged during the holiday-shortened week amid primary issuance of $9.4 billion and rising UST yields; negotiated transactions experienced mixed reception last week, as deals on Tuesday generally saw stronger demand than deals that priced later in the week[1]
  - Since the previous Friday, the increase in tax-exempt yields outpaced the rise in UST yields as 2-year MMD increased 2 bps, while 10- and 30-year MMD rose 17 and 15 bps, respectively[4]
  - Despite more than $24.5 billion of outflows since mid-November, municipal bond funds indicated inflows of $1.1 billion last week[5]
- Primary supply is expected to be manageable this week at $7.5 billion, in line with the trailing 3-year average for the last week in January[1,6]
- In the short-term market, SIFMA reset 1 bp lower to 66 bps amid stabilizing dealer inventory levels and January reinvestment capital
- Market participants this week will likely focus on the December Existing Home Sales report on Tuesday, December Durable Goods data on Friday and the first week of the Trump administration[7]

[1]Bloomberg
[2]CNBC, *How a one-two, Trump-Yellen punch may move interest rates*, 1/19/2017, cnbc.com
[3]Federal Reserve, *January Fed Beige Book*, 1/18/2017, federalreserve.gov
[4]Thomson Reuters Municipal Market Data
[5]Lipper iMoneyNet, as of 1/18/2017
[6]J.P. Morgan Research, *US Fixed Income Markets Weekly — Municipals*, 1/20/2017, jpmm.com
[7]J.P. Morgan Research, *US Fixed Income Markets Weekly — Market Movers Calendar*, 1/20/2017, jpmm.com

Recent J.P. Morgan Transactions

Issuer	Verbal Award Date	Size ($mm)	Rating[1]	Final Coupon	Final Spread	Final Yield	Final Mty
University of Maryland Medical System, MD	19-Jan	152.4	A2/A-/A	5.000%	90	3.73%	2039
University of Maryland Medical System, MD (Taxable)	19-Jan	121.4	A2/A-/A	4.168%	170	4.17%	2029
City of Denton Utility System, TX	19-Jan	214.9	NR/AA-/A+	5.000%	70	3.46%	2036
Lone Star College System, TX	18-Jan	133.0	NR/AAA/NR	4.000%	75	3.62%	2046

Source: J.P. Morgan, Thomson Reuters Municipal Market Data; [1]Enhanced ratings where available

Market Monitor

Short Term Municipal Market	1/20/2017	1/13/2017	10Y Average
SIFMA Index	0.66%	0.67%	0.73%
1-Month LIBOR	0.78%	0.77%	0.98%
SIFMA / 1-Month LIBOR Ratio	85.13%	87.20%	74.84%
Tax-exempt MMF Flows 4-week Avg.[1]	$18 mm	$104 mm	--
Long Term Municipal Market	**1/20/2017**	**1/13/2017**	**10Y Average**
AAA MMD (30-Year)	3.06%	2.91%	3.74%
AA MMD (30-Year)	3.31%	3.15%	3.94%
A MMD (30-Year)	3.69%	3.53%	4.40%
BBB MMD (30-Year)	4.05%	3.89%	4.98%
AAA MMD (30 - 2 Year)	1.97%	1.84%	2.75%
30-Year SIFMA Swap Rate[2]	2.30%	2.22%	3.08%
30-Year 3M LIBOR Swap Rate[2]	2.60%	2.51%	3.54%
All Muni Fund Flows 4-week Avg.[3]	-$1.5 bn	-$2.2 bn	--
Corporate Spreads to UST (bps)	**1/20/2017**	**1/13/2017**	**10Y Average**
J.P. Morgan JULI Index	144	144	200
J.P. Morgan Domestic HY Index	474	476	656

Equities	1/20/2017	1-week Δ	YTD Δ	4-day trend
S&P 500	2,271	-0.15%	0.60%	
DJIA	19,827	-0.29%	-0.27%	
NASDAQ 100	5,063	0.07%	3.09%	
Energy ($)				
WTI Crude Oil (per bbl.)	52.42	0.05	0.09	
Brent Crude Oil (per bbl.)	55.49	0.04	-1.36	

Source: J.P. Morgan, Bloomberg, Thomson Reuters Municipal Market Data, The Bond Buyer; Lipper FMI, iMoneyNet
[1]MMF: Money Market Fund
[2]Direct swaps-related questions to Dave Hand (212) 834-4686
[3]Reflects all tax-exempt mutual funds reporting on a weekly or monthly basis, excluding tax-exempt money market funds

Yield Curve Rates and Ratios

Benchmark / Maturity	1-Year	5-Year	10-Year	30-Year
MMD	0.90%	1.66%	2.33%	3.06%
UST	0.88%	1.94%	2.47%	3.05%
MMD / UST Ratio	102.18%	85.68%	94.49%	100.47%

Source: J.P. Morgan, Thomson Reuters Municipal Market Data

Interest Rate Forecast

MMD Yields	1/20/17	1m ahead	1Q17	2Q17	3Q17	4Q17
2-Year	1.09%	1.10%	1.10%	1.30%	1.55%	1.70%
5-Year	1.66%	1.60%	1.70%	1.80%	2.05%	2.05%
10-Year	2.33%	2.25%	2.55%	2.55%	2.80%	2.70%
30-Year	3.06%	2.95%	3.35%	3.25%	3.55%	3.45%
Taxable Yields	**1/20/17**	**1m ahead**	**1Q17**	**2Q17**	**3Q17**	**4Q17**
Fed Funds	0.66%	0.65%	0.65%	0.90%	0.90%	1.15%
3-Month LIBOR	1.04%	1.05%	1.05%	1.25%	1.30%	1.50%
2-Year T Note	1.19%	1.20%	1.15%	1.45%	1.60%	1.80%
5-Year T Note	1.94%	1.85%	1.85%	2.10%	2.25%	2.40%
10-Year T Note	2.47%	2.40%	2.45%	2.60%	2.70%	2.85%
30-Year T Bond	3.05%	3.00%	3.05%	3.15%	3.25%	3.35%

Source: J.P. Morgan Research, *US Fixed Income Markets Weekly - Municipals*, 1/20/2017, jpmm.com; J.P. Morgan Research, *US Fixed Income Markets: Weekly – US Interest Rate Forecast*, 1/20/2017, jpmm.com; Thomson Reuters Municipal Market Data

For additional market information and commentary, please go to J.P. Morgan Markets at jpmm.com

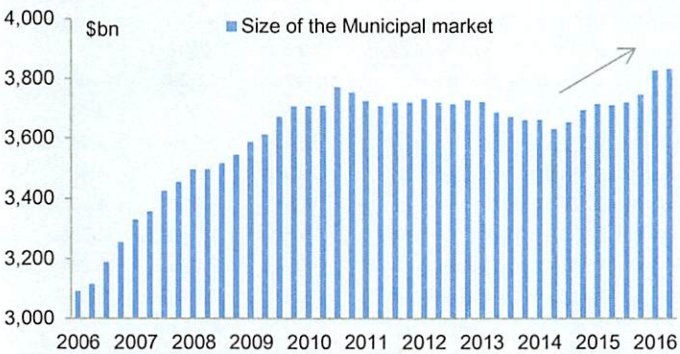
January 23, 2017 | **Market Update for Municipal Issuers** | **J.P.Morgan**

jpmm.com

Public Finance Debt Capital Markets 212-834-3261

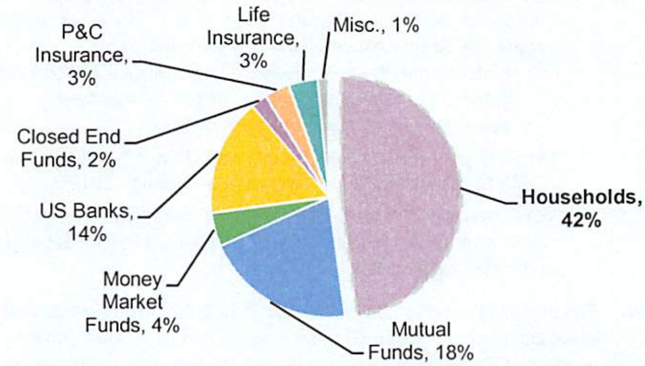
As the municipal market continues to grow, retail buyers remain a significant investor

The size of the municipal market increased to $3.8 trillion in 2016



Source: Fed Flow of Funds, J.P. Morgan Research, *US Fixed Income Markets Weekly — Municipals*, 1/20/2017, jpmm.com

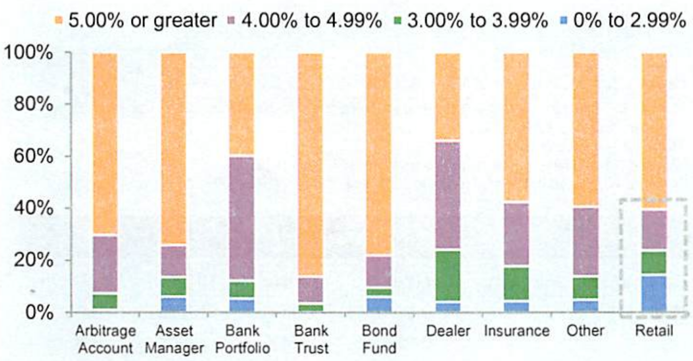
Households hold 42% of outstanding municipal debt, more than twice as much as mutual funds



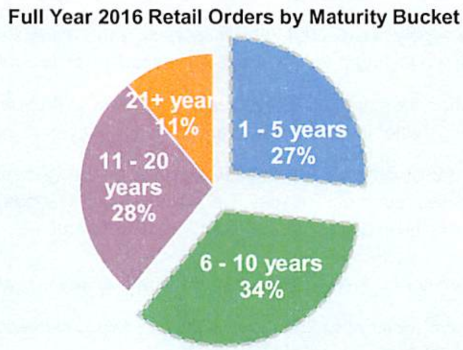
Source: Fed Flow of Funds, J.P. Morgan Research, *US Fixed Income Markets Weekly — Municipals*, 1/20/2017, jpmm.com

Using J.P. Morgan's order information, we analyze the buying patterns of retail investors

Nearly 40% of retail orders were for sub-5.00% coupons…

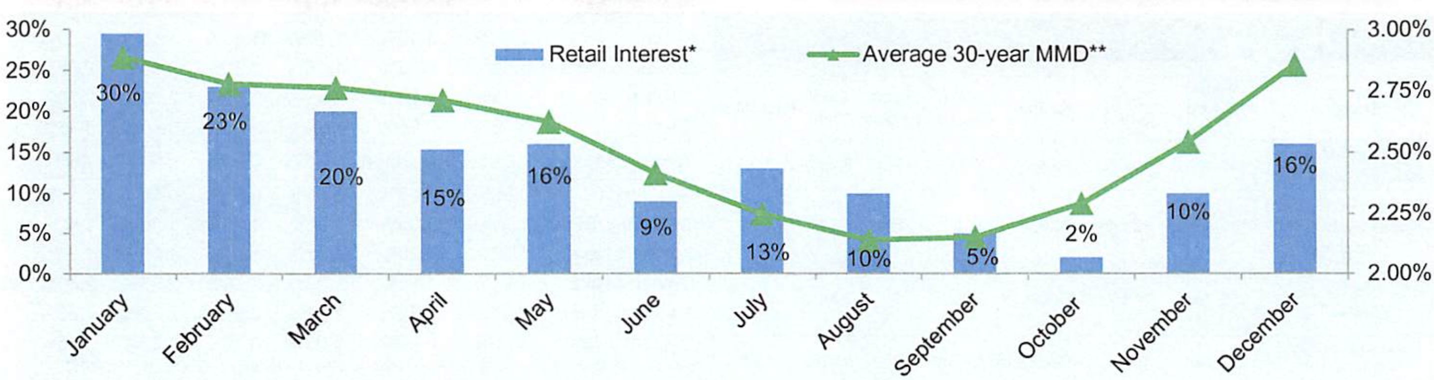


…and 60% were for bonds maturing in 10 years or less



Source: J.P. Morgan order data for full year 2016; reflects J.P. Morgan senior-led tax-exempt fixed rate negotiated issues excluding notes; reflects definition of retail in each respective deal; retail data can include SMAs and individual retail investors. Co-manager, selling group, and underwriter stock orders are excluded.

Retail demand can fluctuate with the absolute level of tax-exempt rates



Source: J.P. Morgan order data; reflects J.P. Morgan senior-led tax-exempt fixed rate negotiated issues (for deals that had retail) greater than $50 million excluding notes; * Retail interest = Total retail order amount / Total amount issued; **MMD average over previous 3 months

Capital Markets Update

Fixed Income | Strategic Analytics

PiperJaffray.
REALIZE THE POWER OF PARTNERSHIP.

Week Ended:
Friday, January 20, 2017

Capital Markets Update

Market Commentary

The AAA municipal curve steepened over the week outpacing the selloff in Treasuries. 2yr, 10yr and 30yr AAA municipal yields increased 2 bp, 17 bp, and 15 bp over the past week. Supply is dwindling over the end of January as this week's supply is projected to be just under $7 bn after $9 bn last week. Meanwhile, 30-day visible supply is at $10.9 bn, near the lowest level in a month and below the $11.8 bn 1yr average. On the demand front, mutual funds saw their first weekly inflow since the election. Mutual funds saw $1,587 mn of inflows for the week ending 1/11/2017 after 13 weeks of outflows. The outflow cycle was relatively short from a historical perspective as the last 3 cycles of mutual fund outflows averaged 24 weeks while this current outflow cycle stands at just 13 weeks. However, there is more room for outflows as new taxes are debated and uncertainty looms over the municipal market.

On the macro front, the Treasury curve steepened over the past week as 30yr rates increased 6 bp while the 2yr was unchanged as elevated CPI and positive NY Empire manufacturing buoyed rates. After two months of gains following the November post-election optimism the Fed's Empire manufacturing survey moved lower. The sentiment surveys have been highly optimistic and have not matched some of the weaker trends in hard data like industrial production. The decline in forward looking indicators such as new orders, may be painting a more realistic picture of the underlying activity in the factory sector as some of the Trump related euphoria begins to dissipate. However, more concerning is the significant jump in prices especially when factory jobs are still contracting. Future improvements in the manufacturing sector may be limited as the stronger dollar will adversely impact foreign demand, especially when the Fed is expected to raise rates several times in 2017. Lower food prices and deep price discounts from apparel during the holiday season were not enough to offset the impact of higher oil prices. Headline CPI increased from 1.7% to 2.1%, its largest level since June 2014. The large increase was mainly due to energy prices that helped narrow the gap between headline and core CPI inflation. Headline CPI (YoY) may continue to grind higher over the next few months as oil prices did not bottom until February 2015. The December report should keep the Fed on the sidelines as core CPI has remained range bound between 2.1% and 2.3% over the past 12 months. Furthermore, the recent strengthening of the dollar should weigh on inflation, although recent comments by president elect Trump that the dollar is "too strong" does raise upside risks to inflation. 10yr and 30yr municipals ended (began) the week yielding 2.33% (2.16%) and 3.06% (2.91%).

Market Rates

	MMD AAA GO Municipal	Weekly Change (bps)	Treasury	Weekly Change (bps)	SIFMA Swap	Weekly Change (bps)	63% LIBOR* + 10 bps	Weekly Change (bps)	MMD - SIFMA	Weekly Change (bps)	Basis Swap* Spreads	Weekly Change (bps)	SIFMA/ LIBOR* Ratio	Weekly Change (%)
1-Yr	**0.90%**	+0	**0.76%**	-3	**0.90%**	+3	0.89%	+3	*0.00%*	-3	*0.00%*	+1	71.0%	0.3%
2-Yr	**1.09%**	+2	**1.19%**	-0	**1.12%**	+5	1.06%	+2	*-0.03%*	-3	*0.07%*	+3	73.9%	2.0%
3-Yr	**1.29%**	+2	**1.49%**	+1	**1.30%**	+6	1.18%	+2	*-0.01%*	-4	*0.12%*	+4	75.7%	2.2%
5-Yr	**1.66%**	+9	**1.94%**	+4	**1.57%**	+8	**1.36%**	+3	*0.09%*	+1	*0.21%*	+5	78.6%	2.1%
7-Yr	**2.00%**	+16	**2.27%**	+7	**1.75%**	+10	1.48%	+5	*0.25%*	+6	*0.27%*	+5	80.1%	1.8%
10-Yr	**2.33%**	+17	**2.47%**	+7	**1.92%**	+10	1.59%	+5	*0.41%*	+7	*0.33%*	+5	81.0%	1.4%
20-Yr	**2.96%**	+18	**2.85%**	+7	**2.20%**	+8	1.72%	+5	*0.76%*	+10	*0.48%*	+3	85.3%	0.4%
30-Yr	**3.06%**	+15	**3.05%**	+6	**2.29%**	+8	1.74%	+5	*0.77%*	+7	*0.55%*	+3	87.8%	0.3%

Bold values indicate levels greater than or equal to 90th percentile, *italics indicate values less than or equal to 10th percentile over the past 12 months*

*Assumes mid-market swap rates

Reinvestment Rates

Avg Life	Gov Only	High Grade
1.5	0.98	1.14
2.5	1.29	1.51
5	1.86	2.20
7	2.16	2.57

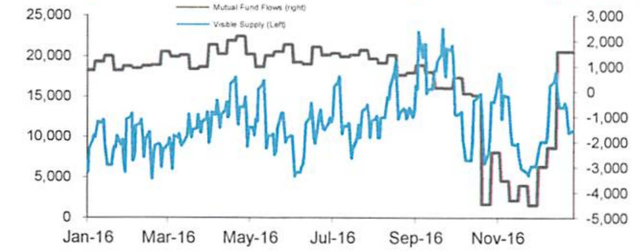
Short-Term Rates

7d SIFMA	0.66%
1m LIBOR	0.78%
3m LIBOR	1.04%
3m T-bill	0.50%
Fed Funds	0.66%

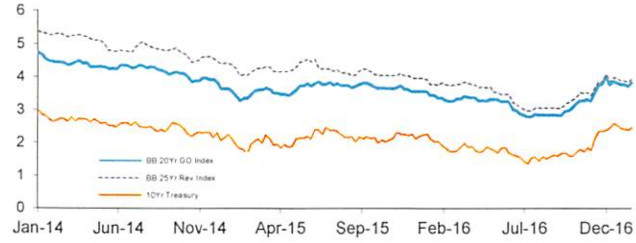
Key Economic Releases

		Estimate	Previous
01/24/17	Existing Home Sales	5.51m	5.61m
01/26/17	New Home Sales	586k	592k
01/26/17	Leading Index	0.5%	0.0%
01/27/17	GDP Annualized QoQ	2.2%	3.5%
01/27/17	U. of Mich. Sentiment	98.1	98.1

Municipal Fund Flows vs. 30-Day Visible Supply ($Millions)



Long-Term Rates



Source: MMD, Bloomberg, IPREO, ICI, Bond Buyer, Piper Jaffray & Co.

Contact: Brett Adlard, CFA, FRM, Vice President, (312) 267-5156

Interest Rate Trend
20 Year 20 Bond Buyer Index
January 1988 to January 2017

Since January 1988:

Interest rates have been higher than the current BBI 89.23% of the time.

Interest rates have been lower than the current BBI 10.77% of the time.

ZIONS ZPFI PUBLIC FINANCE, INC.

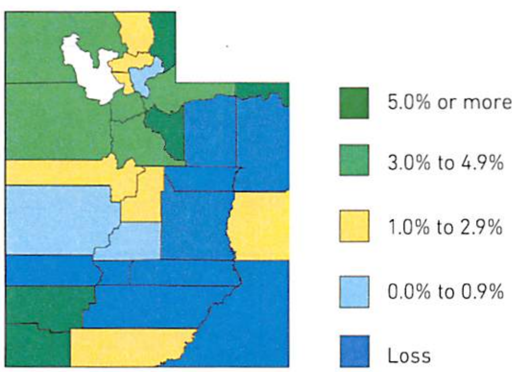
JAN 2017

Highlights

Utah experienced another month of solid employment growth in November 2016, with a 3.0 percent annual growth rate, ranking it 3rd in the nation. The state's unemployment rate also showed signs of a healthy job market, dropping to 3.1 percent in November, its lowest level since 2008. Utah's strong economy has consumers feeling confident in the state's current growth trajectory, with the Utah Consumer Attitude Index reaching its highest level in recent years at 119.8 for November 2016, compared to the U.S. Consumer Confidence Index of 113.7 for the same time period. Utah's population grew at the fastest rate in the nation from 2015 to 2016 at 2.0 percent. Much of that growth was seen in net migration, which saw its largest increase in a decade at 25,412. Total population for the state was estimated at just over 3.05 million in 2016.

PERCENT CHANGE IN EMPLOYMENT

November 2015—November 2016



Source: Utah Department of Workforce Services; Not Seasonally Adjusted, Nonfarm

UNITED STATES EMPLOYMENT FACTS

December 2016

JOBS ADDED:	**156,000**
EMPLOYMENT GROWTH:	**1.5%**
UNEMPLOYMENT:	**4.7%**

Sources: U.S. Bureau of Labor Statistics

U.S. GROSS DOMESTIC PRODUCT

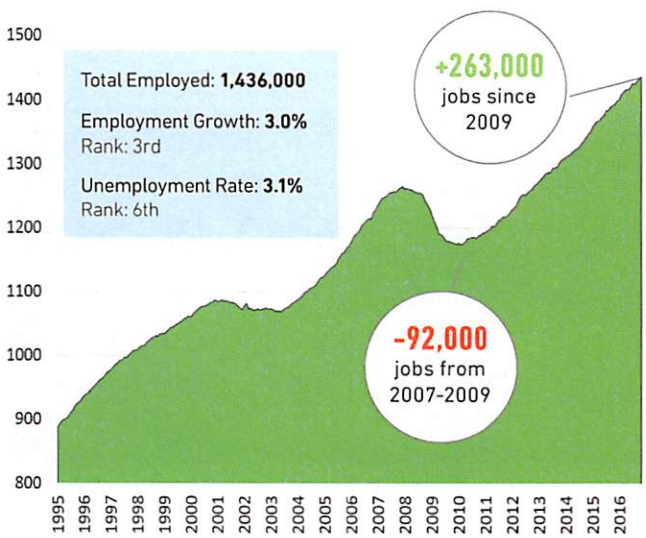
Change in U.S. Gross Domestic Product

Q4 2015	Q1 2016	Q2 2016	Q3 2016
0.9%	0.8%	1.4%	3.5%

Source: Bureau of Economic Analysis

UTAH TOTAL NONFARM EMPLOYMENT

November 2016



Source: U.S. Bureau of Labor Statistics; seasonally adjusted total nonfarm employment
Note: jobs added in thousands; Totals rounded to nearest thousand.

UTAH EMPLOYMENT CHANGES BY INDUSTRY

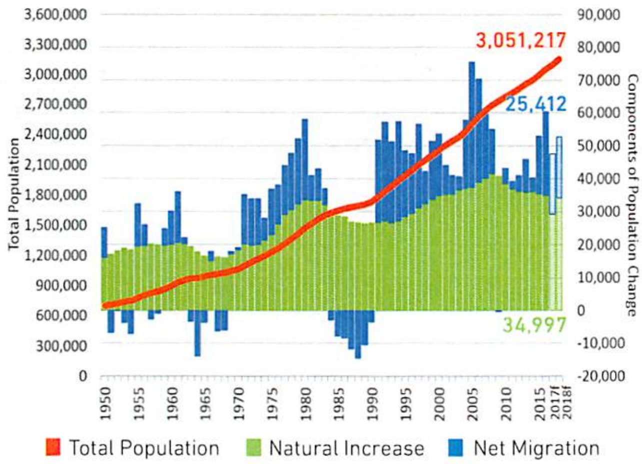
November 2015 - November 2016

INDUSTRY	Growth Rate	Total Change
Natural Resources & Mining	-10.8%	-1,100
Construction	4.5%	4,000
Manufacturing	3.7%	4,600
Trade, Trans., Utilities	2.5%	6,700
Information	0.9%	300
Financial Activity	9.3%	7,600
Professional & Business Services	3.8%	7,500
Education & Health Services	4.9%	9,200
Leisure & Hospitality	1.0%	1,300
Other Services	2.1%	800
Government	0.5%	1,200
TOTAL		42,100

Source: Utah Department of Workforce Services

DEMOGRAPHICS

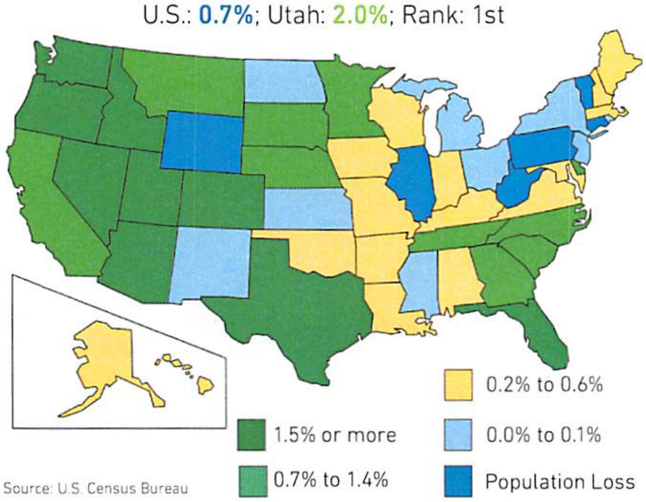
Utah Population and Components of Change



Sources: Utah Governor's Office of Management and Budget, U.S. Census Bureau
Note: Left axis = total population; Right axis = components of population change

U.S. Population Growth: 2015 - 2016

U.S.: **0.7%**; Utah: **2.0%**; Rank: 1st



Source: U.S. Census Bureau

STATE FACTS (VALUE & RANK)

- Median Household Income: **$66,258** (2015) **10th**
- Annual Mean Wages & Salaries: **$44,130** (2015) **28th**
- Per Capita Personal Income: **$39,045** (2015) **43rd**
- Personal Income (% Change): **5.5%** (2014-2015) **3rd**
- Population Growth Rate: **2.0%** (2016: 3,051,217) **1st**
- Total Fertility Rate: **2.33** (2013) **1st**
- Median Age: **30.6** (2015) **1st**
- Household Size: **3.17** (2015) **1st**

Source: U.S. Census Bureau of Economic Analysis, U.S. Bureau of Labor Statistics, National Center for Health Statistics, statista.com
Notes: 1. Ranking are based on the most recent data for all states and may differ from other data. 2. Rank is most favorable to least favorable.

HOUSING

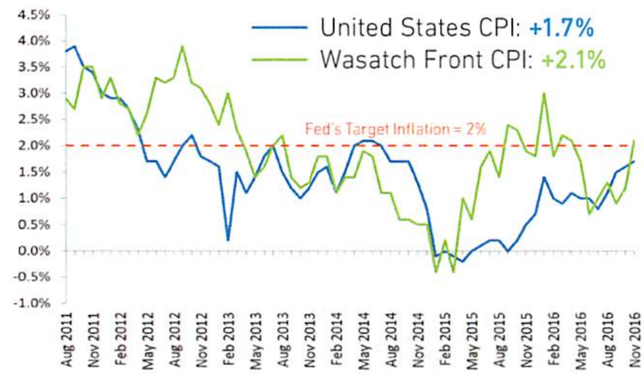
Home Prices and Foreclosures

UTAH		United States
$261,406	MEDIAN HOME PRICE (Oct 2016)	$213,794
7.6% increase	HOME PRICE INDEX (Nov 2015 - Nov 2016)	7.1% increase
0.05%	FORECLOSURE RATE (Nov 2016)	0.07%

Sources: Home prices and indexes from CoreLogic. Foreclosure rates from RealtyTrac.com. CPI from U.S. Bureau of Labor Statistics.

CONSUMER PRICE INDEX

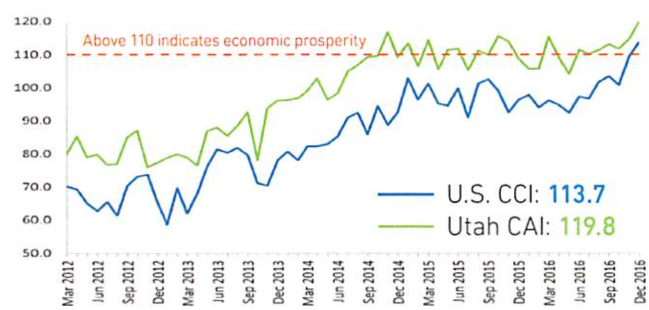
U.S. vs. Wasatch Front Consumer Price Index: Year-Over Change



Sources: U.S. CPI from National Bureau of Labor Statistics and Wasatch Front CPI from Ciscero Group for Zions Bank

CONSUMER CONFIDENCE

U.S. Consumer Confidence Index vs. Utah Consumer Attitude Index



Sources: U.S. CCI from The Conference Board and UT CAI from Cicero Group for Zions Bank Wasatch Front CPI from Ciscero Group for Zions Bank

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As of January 6, 2017