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George Hammond
Director, Uarizona EBRC
ghammond@arizona.edu

Key Topics Today

- **▶** Uncertainty dominates the outlook
 - ► How fast will the state recover?
- ► Arizona has outperformed many states, but still has a long way to go
 - ▶ 65.8% of jobs replaced through October
 - ▶ U.S. replaced 54.5% through October
- ▶ The short-run outlook depends on the outbreak
 - ► Look for continued recovery, but a big surge in the outbreak will slow progress
- ► Baseline includes a major federal fiscal stimulus package in the fourth quarter of 2020
 - ▶ Which contributes to recovery to prior peak in mid 2021
 - ► Pessimistic alternative assumes slower recovery, by the end of next year

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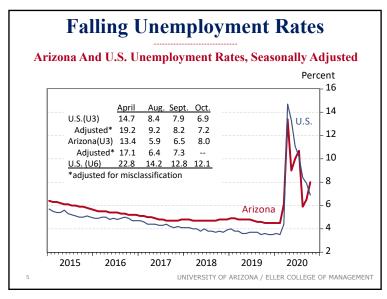
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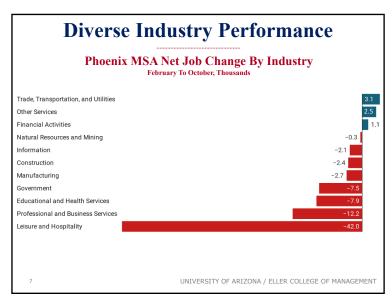
Recovering Unevenly

Nonfarm Payroll Jobs, Seasonally Adjusted

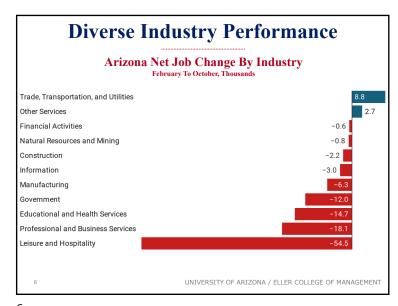
-18.9 -10.0	June -17.4	July -18.3	August -16.4	September -18.6	Octobe
		-18.3	-16.4	-18.6	-17.
10.0					
-10.0	-7.5	-7.3	-5.8	-5.3	-4.5
-8.1	-5.6	-5.6	-4.6	-4.0	-3.3
-3.5	-1.5	-1.8	0.0	-0.9	-1.1
-2.3	-1.2	0.6	0.9	-0.9	-0.3
-6.4	-3.2	-3.9	-3.2	-4.7	-4.0
-7.9	-7.6	-5.9	-5.0	-5.2	-5.5
-7.8	-5.2	-5.1	-4.3	-4.1	-3.4
-12.7	-9.6	-8.5	-7.5	-7.0	-6.6
	-3.5 -2.3 -6.4 -7.9	-3.5 -1.5 -2.3 -1.2 -6.4 -3.2 -7.9 -7.6 -7.8 -5.2	-3.5 -1.5 -1.8 -2.3 -1.2 0.6 -6.4 -3.2 -3.9 -7.9 -7.6 -5.9 -7.8 -5.2 -5.1	-3.5 -1.5 -1.8 0.0 -2.3 -1.2 0.6 0.9 -6.4 -3.2 -3.9 -3.2 -7.9 -7.6 -5.9 -5.0 -7.8 -5.2 -5.1 -4.3	-3.5 -1.5 -1.8 0.0 -0.9 -2.3 -1.2 0.6 0.9 -0.9 -6.4 -3.2 -3.9 -3.2 -4.7 -7.9 -7.6 -5.9 -5.0 -5.2 -7.8 -5.2 -5.1 -4.3 -4.1



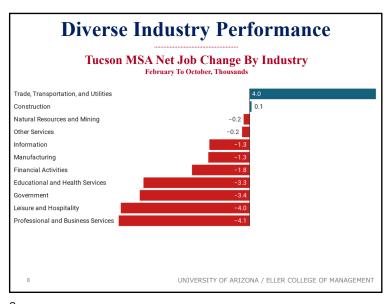
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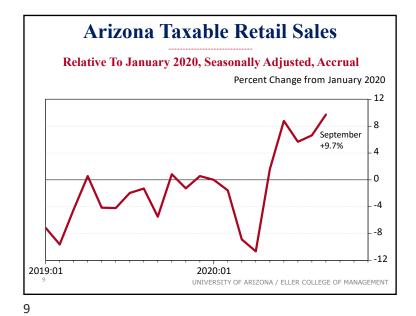


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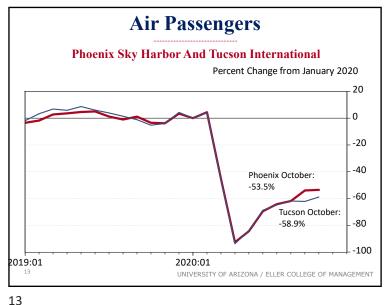


Arizona Restaurant, Bar & Hotel Sales Taxable Sales Relative to January, Seasonally Adjusted, Accrual Percent Change from January 2020 10 -10 -20 September -15.2% -30 -40 -50 2019:01 2020:01 UNIVERSITY OF ARIZONA / ELLER COLLEGE OF MANAGEMENT 10



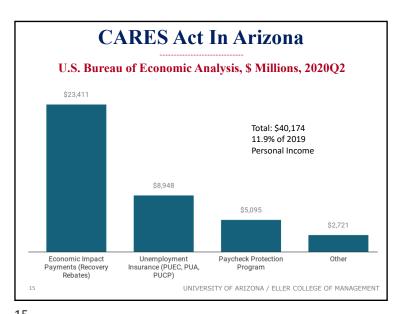
Arizona Gasoline Sales Taxable Sales Relative To January, Seasonally Adjusted, Accrual Percent Change from January 2020 10 0 -10 September Gallons: -6.1% -20 Sales: -28.8% -30 Gallons -40 — Sales -50 2019:01 2020:01 UNIVERSITY OF ARIZONA / ELLER COLLEGE OF MANAGEMENT

George Hammond Director, Uarizona EBRC ghammond@arizona.edu



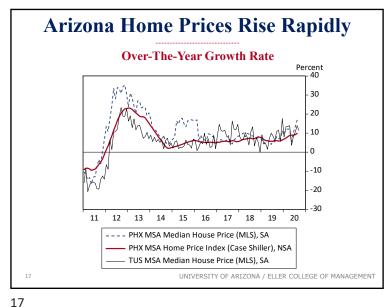
Over-The-Year Growth Rate Percent 70 60 Arizona (2020Q2) 50 +11.7% Net Earnings from Work: -0.4% 40 Dividends, Interest, Rent: -1.3% 30 Transfer Receipts: +62.2% 20 10 0 16 17 18 19 20 UNIVERSITY OF ARIZONA / ELLER COLLEGE OF MANAGEMENT 14

A Major Surge In Arizona Transfers

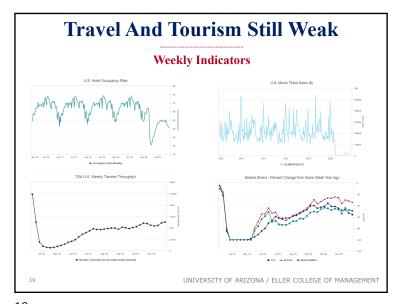


Arizona Housing Permits Surge Annualized Rate, Trend-Cycle Component Thousands 100 80 60 Arizona 40 Phoenix 20 Tucson 90 95 00 05 20 10 15 UNIVERSITY OF ARIZONA / ELLER COLLEGE OF MANAGEMENT

George Hammond Director, Uarizona EBRC ghammond@arizona.edu





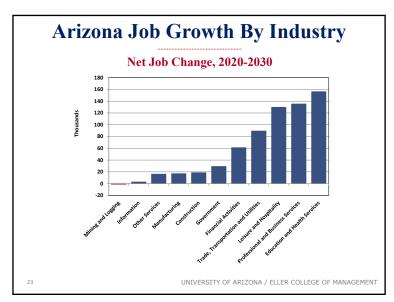


George Hammond Director, Uarizona EBRC ghammond@arizona.edu Arizona, Phoenix, And Tucson Outlook

- ► Continued recovery, with gradual improvement
 - ▶ Resurgence of the outbreak will slow progress
- ▶ Arizona jobs return to pre-pandemic levels in mid-2021 under the baseline
 - ▶ Pessimistic alternative suggests late 2021
- ▶ Personal income growth is strong this year, slow next year
 - ▶ Driven by the federal fiscal policy injection in 2020 and withdrawl in 2021 under baseline assumptions
- ▶ Population growth remains solid, which supports construction activity

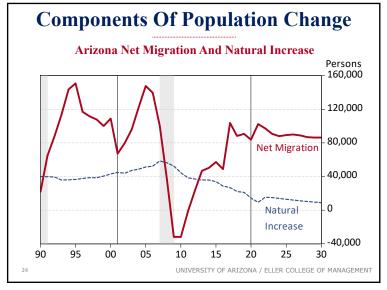
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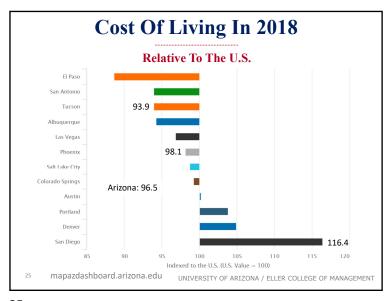
Arizona Short-Run Summary							
Over-The-Year Growth Rates							
	Actual	Forecast					
	2019	2020	2021	2022			
Growth Rate		_		_			
Nonfarm Jobs	2.8	-2.0	4.3	3.2			
Personal Income	5.0	6.4	0.9	5.8			
Retail Plus Remote Sales	7.7	9.5	4.4	3.1			
Population	1.6	1.4	1.5	1.5			
Level							
Unempl. Rate	4.7	7.6	6.3	5.2			
Housing Permits	46,580	53,526	49,885	46,880			
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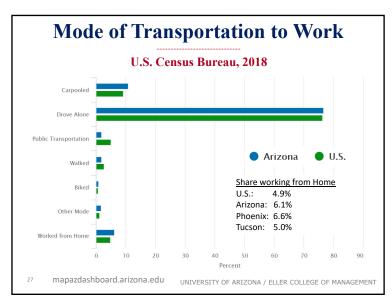
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ghammond@arizona.edu







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ghammond@arizona.edu

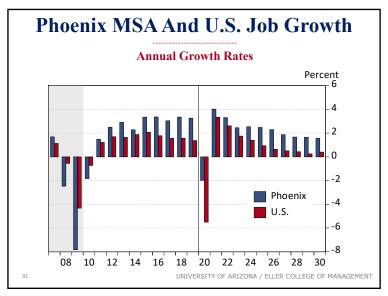
Gross N	Aigration Fl	ow To Arizona, A	annual Averag	ge, 2014-2018, l	PUMS
	Arizona		Phoenix MSA		Tucson MSA
California	62,086	California	39,091	California	7,398
Washington	15,313	Texas	10,014	Washington	2,464
Texas	15,251	Washington	9,803	Texas	1,982
Illinois	12,385	Illinois	9,706	Florida	1,796
Colorado	11,556	Colorado	7,489	Colorado	1,709
Oregon	9,691	Oregon	6,484	Virginia	1,496
Utah	8,528	Florida	5,452	Oregon	1,247
Florida	8,423	New Mexico	5,237	Illinois	1,220
New Mexico	8,170	Minnesota	5,234	Nevada	1,045
Michigan	7,385	Michigan	5,213	Michigan	1,003
Midwest	56,330		41,748		6,872
Northeast	18,693		12,772		3,468
South	56,385		35,299		9,929
West	133,462		82,022		16,445
Total	264.870		171.841		36,714

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	Arizona	<u>.</u>	hoenix MSA		Tucson MSA
California	23,422	California	13,767	California	2,394
Nevada	11,919	New Mexico	2,295	New Mexico	614
New Mexico	5,854	Texas	2,243	Texas	435
Utah	3,739	Nevada	1,740	Nevada	246
Texas	3,206	Utah	1,548	Colorado	231
Colorado	2,229	Colorado	1,194	Washington	150
Washington	1,117	Illinois	857	Florida	145
Illinois	1,071	Washington	803	Illinois	131
Florida	739	Florida	475	Utah	117
Oregon	567	Oregon	403	Nebraska	115
Midwest	3,641		2,640		543
Northeast	1,167		826		197
South	6,234		4,266		964
West	50,024		22,565		3,953
Total	61,066		30,297		5,657

		With Jobs In Arizona			
0 "6 :	Arizona		noenix MSA	0 117 1	Tucson MS
California	14,869	California	7,941	California	567
New Mexico	4,184	New Mexico	1,533	New Mexico	177
Nevada	3,012	Nevada	1,256	Texas	121
Utah	1,697	Texas	1,172	Nevada	104
Texas	1,639	Utah	866	Florida	48
Colorado	1,116	Colorado	683	Colorado	40
Florida	467	Washington	315	Illinois	39
Washington	431	Florida	279	Virginia	35
Illinois	411	Illinois	266	Michigan	34
New York	392	Oregon	249	Ohio	27
Midwest	2,084		1,323		179
Northeast	1,222		731		86
South	3,765		2,393		341
West	26,117		13,182		957
Total	33.188		17.629		1.563

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ghammond@arizona.edu

Phoenix MSA Short-Run Summary

Over-The-Year Growth Rates

	Actual	ı	Forecast		
	2019	2020	2021	2022	
Growth Rate	_			_	
Nonfarm Jobs	3.3	-2.0	4.0	3.3	
Personal Income*	5.5	6.7	2.4	6.1	
Retail Sales Less Food	6.2	5.2	5.0	5.2	
Population	1.9	1.7	1.9	1.8	
Level					
Housing Permits	35,873	41,159	39,174	38,272	

*Personal income is forecast in 2019.

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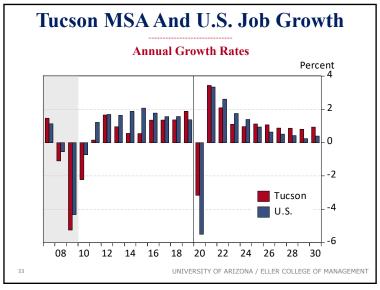
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Tucson MSA Short-Run Summary

Over-The-Year Growth Rates

	Actual	F		
	2019	2020	2021	2022
Growth Rate				
Nonfarm Jobs	1.9	-3.2	3.4	2.1
Personal Income*	4.8	6.8	0.9	4.1
Retail Sales Less Food	5.4	4.0	3.2	4.0
Population	1.0	0.8	1.1	1.0
Level				
Housing Permits	4,313	4,693	4,470	4,390
*Personal income is foreca	st in 2019.			

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Key Takeaways ▶ Uncertainty dominates the outlook ► The pandemic will impact the outlook, particularly in the near term ► The Arizona economy has recovered faster than the U.S. and many states ▶ But the pace of recovery has slowed significantly during the past four months ▶ The travel and tourism sector remains weak ▶ The baseline forecast calls for the state to reach prepandemic levels in mid 2021 ▶ But with a surging outbreak and without federal stimulus in the fourth quarter, it will likely be later ► Solid population growth is likely to continue as Arizona's relatively low cost of living, strong job growth, and natural amenities draw migrants from other states UNIVERSITY OF ARIZONA / ELLER COLLEGE OF MANAGEMENT

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George Hammond
Director, Uarizona EBRC
ghammond@arizona.edu

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