Members Present:
Dan Anderson, Arizona Board of Regents
Brian Cary, Salt River Project
Tracy L. Clark, Editor, JP Morgan Chase Arizona Blue Chip Economic Forecast
Dennis Doby, Arizona Department of Commerce
Pete Ewen, Arizona Public Service
Dean Martin, State Treasurer
Georganna Meyer, Arizona Department of Revenue
Elliott Pollack, Elliott D. Pollack and Company
Martin Shultz, Pinnacle West Capital Corporation

Mr. Richard Stavneak, Director, JLBC Staff, opened the meeting at 9:40 a.m. and welcomed everyone to the Finance Advisory Committee (FAC) meeting. The panel meets 3 times a year to discuss the economy and to provide the Legislature with guidance on state revenue projections.

Mr. Stavneak, Mr. Eric Jorgensen, Mr. Hans Olofsson, and Mr. Martin Lorenzo, gave the JLBC Staff presentation with an overview of state revenues. (Click here to view.)

Mr. Elliott Pollack, Elliott D. Pollack & Company, gave a slide presentation on the national and local economy. (Click here to view.)

Mr. Stavneak asked Mr. Pollack about the Federal Government and Treasury’s attempted fixes over the last 4 weeks. He asked if this is just an indication of impatience and are we unrealistically expecting things to turn around quickly. Mr. Pollack stated that it is a combination of impatience on the part of the market and impatience on the part of the Federal Government. These actions are not designed for the average guy on the street to get an auto loan. They are designed for overnight loans to banks and the commercial paper market to continue, because without overnight loans to banks and without the commercial paper market, this economy cannot function. People who are not credit-worthy will still not get credit loans. They are still not going to get mortgage loans. They are still going to need very good credit to get those loans. He stated that the economy floats on a sea of credit. The consumers need credit to buy cars, TV’s, and to send their kids to school. Business needs credit to meet payrolls, to expand equipment, and to finance inventories. Municipalities need credit to build libraries and roads. Essentially, if either corporate or banking can not get credit, the economy quickly deteriorates. In Mr. Pollack’s opinion, these actions are designed to keep the basic system afloat.
Senator Allen asked Mr. Pollack why the Federal Government let Lehman Brothers fail. Mr. Pollack responded that at the time, they figured that was the best solution. The Federal Government thought that there would not be a bunch of dominoes falling if Lehman failed and at that particular moment and time they had to let the market clear. They would have let AIG fail except for that AIG was the major insurer of mortgage-backed securities so if they failed all of the guarantees would go away so banks would have had to write down billions of dollars of insured mortgage-backed securities. They felt that was a domino they could not let fall. Once that happened they had to change their game plan.

In response to Representative Pearce’s statement, Mr. Pollack, said “when you spend temporary revenues as though they are permanent, sometimes it comes back and gets you. As far as the Federal Government is concerned, I think that they had to do something. I think that what they have done is a spectacularly bad idea, but I think they had to do something. They did have to meddle in this case. But, if you go back to the seeds of this whole problem, it has to do with the Community Reinvestment Act and the fact that the Federal Government put pressure on Fannie Mae and Freddie Mac to do subprime loans in 1999.” He added that the only problem with what they are doing with the banking system is what type of political pressure will banks have now to make loans they should not make?

In response to a statement from Mr. Martin Shultz regarding bonds, Mr. Pollack stated that things are very ‘iffy’. It has gone past an economic problem. It is now a psychological problem and psychological problems take a long time to fix. This is not a quick fix. This is months if we are lucky, until things start to unfreeze. The Federal Government is doing everything they can do to unfreeze it, but it is past just economics.

Mr. Stavneak asked Mr. Pollack for his reaction relative to the revenue ranges presented in the 4-sector forecast. Mr. Pollack stated that it would be reasonable to anticipate bad news rather than good news. Surprises are likely to be on the down-side, not the up-side.

Mr. Pete Ewen, Arizona Public Service, gave a slide presentation on population and growth estimates. (Click here to view).

Mr. Stavneak asked Mr. Ewen for his reaction to the 4-sector forecast. Mr. Ewen said he agrees with Mr. Pollack’s comments to a large degree. Probably the figures for FY 2009 and FY 2010 are still optimistic and there is much more risk to the down-side then the up-side.

Mr. Brian Cary, Salt River Project (SRP), spoke regarding the SRP population outlook. He researched financial records going back to 1951, and concluded that the current growth rate we are experiencing is, if not the slowest in the history of the company, at least as slow as it has ever been since 1951.

Mr. Dean Martin, State Treasurer, gave a handout to members and made a presentation regarding the State Operating Account. (See Attachment 1) The State Operating Account is the largest account that the state has. It is where the General Fund resides as well as all other state funds before distribution to other accounts. The operating account is a good indication of the daily health of the state budget and account.

Mr. Tracy Clark gave a presentation on the federal funds rate. He stated that the Federal Funds rate is the rate at which banks borrow from each other for 24 hours in order to balance out their accounts so that they can make their reserve requirements. He noted that as the financial crisis worsened, there was a large amount of fluctuation in the rates actually paid to borrow money, and the Federal Government has attempted to prop up the banks. He also noted that we will be able to tell if the Federal Government’s actions are working when the rates at which banks lend to each other stabilize. Finally, Mr. Clark agreed that the risks to the revenue forecasts as presented are on the down side.

(Continued)
Dan Anderson, Assistant Executive Director for Institutional Analysis for Arizona Board of Regents, stated that these are obviously incredible times that none of us have seen before. It is the psychology of what is going on that is creating the most volatility. It is very difficult at this time with so many things going on to get a clear understanding of what the future holds. So come 3-6 months down the road, he thinks we will have a better feel. We know that monetary factors can be 6 months, 9 months, or years before they really have the full effect. These things are very slow to unwind, but to state the obvious, these are incredible times and unfortunately incredible on the bad side.

Ms. Georganna Meyer, Chief Economist, Arizona Department of Revenue noted that she has been working on updating credit numbers and is about to complete the FY 2006 year. Corporate credits are up to $70 million in FY 2006. She is still waiting for over $20 million already approved in corporate tuition tax credits to come through the pipeline. Over $100 million in already approved motion picture industry credits also still need to come through the pipeline. That does not account for the $25 million in corporate tuition tax credits that have not even hit yet, and the additional $130 - $150 million in motion picture that have not hit. About the time we get to FY 2011 and FY 2012, the full impact of the optional sales factor weight increase for the apportionment ratio is going to kick in. Additionally, the increase in the research and development credit is going to kick in. So all of these are going to be exacerbating factors on growth rates for the corporate income tax.

Mr. Stavneak asked Ms. Meyer if they are still doing the work on the sales factor issue in terms of whether or not those correspond to what we had originally forecasted.

Ms. Meyer stated yes. She is planning on getting out an update on those numbers for both the apportionment and R & D credit within a couple of weeks.

Mr. Dean Martin, State Treasurer, stated he wanted to expand on something Dan and Tracy said about it being a psychological problem. He stated that the $700 billion plan and the way it is being implemented is very Treasury-Secretary specific. The problem is Paulson is not going to be there after January 20. There is just too much uncertainty because of how much that bailout is depending upon what the new Treasury Secretary intends to do with the money. This means that once that starts to impact, it will start to unfreeze the markets if we are lucky at the beginning of next year. The trickle down impact for us in Arizona will not be felt this fiscal year at all. It is not designed to help the average person. It is to make sure that the average person’s bank is still around next year. He does not see any benefit from this really impacting from a psychological point of view. He does not see a boost in morale increasing people’s holiday spending leading into this holiday. That is the reason why we are showing a larger drop in our forecast for revenues this fiscal year.

Mr. Stavneak stated that the next meeting will be in mid-January once the Legislators are back in session, so that they will have a greater opportunity to attend the meeting.

The meeting adjourned at 11:07 a.m.
Finance Advisory Committee
October 15, 2008

State Budget Update

State Total Operating Account Average Monthly Balance
July 1980 to present

Total Operating Account Monthly Balance
July 1990 to present

Housing Bubble Bursts

Jul '90-Mar '91 Recession

Jul '01-Nov '01 Recession
’08 General Fund Base Revenue Decline of (4.6)% Was Greater Than Budgeted

Excludes statutory and one-time changes.
Decline Accelerated in Second Half of FY ’08

1st Qtr 2nd Qtr 3rd Qtr 4th Qtr

Percent Change From FY 2008

-1.6%  -3.9%  -13.7%  -11.7%
FY ’09 Revenues Will Need to Grow By 6.1% to Meet $10.0 B Budgeted Level

• Original budgeted FY ’09 growth compared to enacted ’08 Budget 1.9%
• Growth adjusted for lower ’08 Base 6.1%
‘09 Revenue Collections Continuing to Decline
- First Quarter Decline = (9.0)%

Percent Change Below FY 2008

JLBC
All Major Tax Categories Declined in 1st Quarter of FY ‘09

- Sales: -7.4%
- IIT: -4.9%
- CIT: -27.4%

Excludes statutory and one-time changes.
Where Are We Headed Over the Next Few Years?
- Four-Sector Consensus Forecast Incorporates Different Economic Views, Including the FAC

4-sector forecast equally weights:

- FAC average
- UofA model - base
- UofA model - low
- JLBC Staff forecast
- Remaining revenues (2% of total) are staff forecast

* Includes Big 3 categories of sales tax, individual income and corporate income taxes.
Sales Tax
- The Consensus Forecasts Declines of (3.3)% in ’09
  and Another (0.8)% in ‘10

Fiscal Year

Year Over Year % Change

FY 2008 Actual = $4.3 Billion

* 5.6% without the $(55.2) million estimated payment threshold change.
Construction and Vehicles Constitute 37% of Sales Tax Collections

- Contracting: 21%
- Retail-Home: 6%
- Retail-Auto: 10%
- Retail-Other: 29%
- Utilities: 8%
- Rest/Bars: 8%
- Use: 7%
- Other: 11%

% of Total
Construction and Vehicle Spending Have Declined Significantly

FY 2009 Year to Date – (Through August)
Individual Income Tax
- The Consensus Forecasts Declines of (3.0)% in ’09 and Another (0.2)% in ’10

FY 2008 Actual = $3.4 Billion

* Excluding the 10% phased-in rate reduction, growth would have been 6.3% in ‘07, and (4.1)% in ’08.
Individual Income Tax
Capital Gains Are A Volatile Source of Income Tax Collections

Estimates Based On IRS SOI Data

Individual Income Tax

Capital Gains Are A Volatile Source of Income Tax Collections

Fiscal Year

Amount of IIT Attributable to CG

CG as % of IIT

JLBC
Sharp Downturn in Stock Market Will Have Adverse Effect on FY09 Capital Gains

- In FY07, about $730m (19%) of tax collections attributable to capital gains.
- FY08 capital gains won’t be known until June 2009.
- Capital gains could see sharp drop off in FY 09 due to recent stock market losses.
Corporate Income Tax
- The Consensus Forecasts Declines of (16.3)% in ’09 and Another (2.3)% in ’10

* Excluding tax law changes, growth would have been 12.8% in ‘07, and the ’08 decrease would have been (14.7)%. 

FY 2008 Actual = $785 Million
October 4-Sector Projecting Revenue Decline of (4.4)% in FY ‘09
- March Forecast for FY ’09 was 0.5% Increase

Weighted Big 3 Average
Prior to Tax Law Changes
Each Sector Shows Improvement for FY ’10, But Overall Forecast Still A (0.7)% Decline

Weighted Big 3 Average
Prior to Tax Law Changes
Growth Remains Slow Until FY 2011

Fiscal Year

0% 5% 10% 15% 20% 25%

Year Over Year Percentage Change

'99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12

10.8% 7.8% 6.3% 0.4% 18.1% 20.1% 6.9% -4.6% -4.4% 5.6% 7.6%

Actual Forecast *

* 4-sector forecast weighted average growth.
What Did We Get Right?
- Current Problems Acknowledged A Year Ago

Main Problems

• Housing Market
  – Imbalance in supply and demand.
  – Mortgage financing.

• Inflated Revenue Base
  – Revenues grew 38% in ’05 and ’06 compared to 19% personal income growth.

• “Wealth Effect”
  – Declining housing values affect consumer psyche.

Source: 12/07 FAC Presentation
What Did We Get Wrong?
- Magnitude of Problem Greater than Expected

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<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>General Fund Revenue Growth</td>
<td>2.6%</td>
<td>1.0%</td>
<td>0.5%</td>
<td>-4.4%</td>
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FY 2009 4-Sector Consensus Forecast
General Fund Revenue Growth
How Does the 4-Sector Affect the Shortfall Estimates?

- JLBC Staff Provided Legislature Estimates On Oct 1

- In lieu of 4-sector, JLBC Staff estimated ’09 revenue decline of between 0% and (5.0)%.
- This range produced a shortfall estimate of between $(550) M and $(1.0) B.
- October 4-sector predicts ’09 decline of between (1.5)% and (5.7)%. 

JLBC
New FY ’09 Shortfall Estimate: $(700) M to $(1.1) B

• A revenue decline of (1.5)% would lead to a shortfall of $(700) M.
• If revenues decline (5.7)%, shortfall would grow to $(1.1) B.
• Both estimates include an added $50 M for unpaid ’08 bills.
• There are no known agency supplemental requests, but AHCCCS is reporting a $50 M shortfall.
## ’09 Revenue and Expenditure Comparison

($ in Billions)

<table>
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<tr>
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<th>$700 M Option</th>
<th>$1.1 B Option</th>
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<tbody>
<tr>
<td><strong>Revenues</strong></td>
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<tr>
<td>On-going</td>
<td>8.6</td>
<td>8.2</td>
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<tr>
<td>One-time</td>
<td>0.7</td>
<td>0.7</td>
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<tr>
<td><strong>Total</strong></td>
<td>9.3</td>
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<tr>
<td><strong>Spending</strong></td>
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<tr>
<td>On-going</td>
<td>10.7</td>
<td>10.7</td>
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<tr>
<td>One-time</td>
<td>(0.7)</td>
<td>(0.7)</td>
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<tr>
<td><strong>Total</strong></td>
<td>10.0</td>
<td>10.0</td>
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<tr>
<td><strong>Balance</strong></td>
<td>(0.7)</td>
<td>(1.1)</td>
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What Is The Maximum FY ’10 Shortfall? $(3.0) B Based On Several Assumptions

- October 4-Sector forecasts.
- $400 M in enacted one-time ’09 items are not continued.
- Resolution of new ’09 shortfall uses only one-time solutions.
- State equalization tax is repealed.
## Changing Policy Assumptions Could Reduce ’10 Shortfall
- Would Drop By $1.1 B To A Total Of $(1.9) B

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<tr>
<th>Description</th>
<th>Amount ($ in M)</th>
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<tr>
<td>If 50% of prospective new ’09 shortfall solutions are on-going</td>
<td>$ 480</td>
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<tr>
<td>If enacted ’09 one-time solutions are kept in ’10</td>
<td>400</td>
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<tr>
<td>Restore equalization tax per statute</td>
<td>260</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$1,140</strong></td>
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## FY2009-FY 2012 Quartile Forecast Worksheet

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<th>FY 2009</th>
<th>FY 2010</th>
<th>FY 2011</th>
<th>FY 2012</th>
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<td><strong>Sales Tax</strong></td>
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<td>JLBC Forecast</td>
<td>-3.3%</td>
<td>0.9%</td>
<td>4.7%</td>
<td>6.0%</td>
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<tr>
<td>UA - Low</td>
<td>-3.6%</td>
<td>-4.3%</td>
<td>2.4%</td>
<td>8.3%</td>
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<td>UA - Base</td>
<td>-2.6%</td>
<td>-1.4%</td>
<td>4.9%</td>
<td>9.3%</td>
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<tr>
<td>FAC Survey</td>
<td>-3.6%</td>
<td>1.5%</td>
<td>5.4%</td>
<td>6.2%</td>
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<tr>
<td><strong>Average:</strong></td>
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<td>-0.8%</td>
<td>4.4%</td>
<td>7.5%</td>
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<td><strong>Average:</strong></td>
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<td><strong>Corporate Income Tax</strong></td>
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<tr>
<td>JLBC Forecast</td>
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<tr>
<td><strong>Average:</strong></td>
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<td>9.1%</td>
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<td><strong>Consensus Weighted Average:</strong></td>
<td>-4.4%</td>
<td>-0.7%</td>
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<td><strong>JLBC Weighted Average:</strong></td>
<td>-4.9%</td>
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<td><strong>UA Low Weighted Average:</strong></td>
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<td><strong>UA Base Weighted Average:</strong></td>
<td>-1.5%</td>
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<td><strong>FAC Consensus Weighted Average:</strong></td>
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Forecast percentages are prior to tax law changes.
2009: A Good Year to Stay Away from Sharp Objects

Presented by: Elliott D. Pollack

Presented to: Finance Advisory Committee
October 15th, 2008
Where do we stand?
Actions of the Fed..
Bail out?
Bail out?

= a BAD year
or
a TERRIBLE year.
It’s time to lower our expectations.
United States Real Gross Domestic Product*
Annual Growth 1970 - 2009**
Source: U.S. Bureau of Economic Analysis & Blue Chip Economic Indicators

* Based on chained 2000 dollars.
** 2008 - 2009 are forecasts from the Blue Chip Economic Indicators, September 2008
Basic Story

Consumer

- Too much debt
- Not enough traditional savings
- Poor stock market and housing price performance
- Jobs and hours worked declining
- Prices on basics, such as oil and food, have been rising
Consumer

- Consumer spending squeezed
- Big cuts in spending on durables
- Also cuts in non-durables and services
Basic Story

Business
- Has been strong due to weak dollar / strong exports
- Weakness in rest of world will hurt exports
The Result

Business

- Business spending on plant & equipment will not be as strong as it has been
- Trade deficit will improve, but more slowly
Basic Story

Housing
- Supply / demand imbalance continues
- No quick fix for credit markets
- Foreclosures to continue at high rates
The Result

Housing
- Drag on economy from housing will end because comparisons so easy
- But drag on economy from commercial will get worse
How many more shoes can drop?
Weakening economies are more sensitive to shocks.
The Consumer
Wealth Effect
What Will Happen to HH Net Worth?

**In the 90s**
Housing prices increased moderately, but stock market boomed.

**First half of 2000’s**
Stock market was doing poorly, but housing prices boomed.

**Now**
Declining housing prices AND poor results in the stock market.
Median Price of Resale Homes
Percent Change Year Ago
2003 – 2008*

Source: National Association of Home Builders

*Data through August 2008
Mortgage Equity Withdrawal
as a share of Disposable Income
U.S.: 1971 – 2008*
Source: Bureau of Economic Analysis

* Data through second quarter 2008
Dow Jones Stock Prices
Percent Change Year Ago
1980 – 2008*

Source: www.economy.com

*Data through October 8, 2008
Financial Obligation Ratio**
1980 – 2008*
Source: Federal Reserve

15.0%
16.0% 17.0%
18.0%
19.0% 20.0%

1980 Q1
1981 Q1
1982 Q1
1983 Q1
1984 Q1
1985 Q1
1986 Q1
1987 Q1
1988 Q1
1989 Q1
1990 Q1
1991 Q1
1992 Q1
1993 Q1
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1996 Q1
1997 Q1
1998 Q1
1999 Q1
2000 Q1
2001 Q1
2002 Q1
2003 Q1
2004 Q1
2005 Q1
2006 Q1
2007 Q1
2008 Q1

*Data through second quarter 2008

**Ratio of mortgage and consumer debt (including auto, rent and tax payments) to disposable income.
Savings Rate
1980 – 2008*
Source: Federal Reserve

*Data through second quarter 2008
Business: Finally taking it on the chin?
The extent depends on the industry...
Saving Graces

- Corporations have been in good financial shape.
- Exports have been booming.
Industrial Production
Percent Change Year Ago
1973 – 2008*
Source: The Conference Board

*Data through August 2008
National Employment
Percent Change Month Ago, Annualized (S/A)
1981 – 2008*
Source: U.S. Bureau of Labor Statistics

*Data through September 2008
Hours Worked
Percent Change from Year Ago
1976 – 2008**
Source: Bureau of Labor Statistics

**Data through second quarter 2008

Source: The Federal Reserve

Recession Periods

*Data through September 2008
U.S. Real Exports
as a Percent of Real GDP
1971 – 2008*

Source: Bureau of Economic Analysis

*Data through second quarter 2008
Corporate Profit
(Billions of Dollars, SA)
1975-2008*
Source: Freelunch.com

Recession Periods

*Data through second quarter 2008
Is credit now tight?
Tougher Mortgage Loan Standards
Source: Federal Reserve Survey, July 2008

• 85.7% of banks tightened on sub-prime mortgages.

• 84.4% of banks tightened on “non-traditional” mortgages
  (ARMs, Interest-only, or Limited Income Verification loans).

• 74.0% of banks tightened on prime mortgage loans.
Percentage of Large U.S. Banks Reporting Tougher Standards on Business Loans
1997 – 2008*

Source: Federal Reserve, Board of Governors

* Data as of July 2008 survey.
High Yield Credit Spread
2004 – 2008*
Source: Bespoke Investment Group; Merrill Lynch

*Data through October 8, 2008.
** The spread between high yield corporate bonds (non investment grade/below bbb rated) and comparable Treasuries.
High Yield Credit Spread
1997 – 2008*

Source: Bespoke Investment Group; Merrill Lynch

*Data through October 8, 2008.

** The spread between high yield corporate bonds (non investment grade/below bbb rated) and comparable Treasuries.

Elliott D. Pollack & Company
U.S. Summary:
The economy will be very weak for the remainder of 2008; not so great in 2009.
What’s Happening in Arizona?
Arizona & US Move Together
(Nonfarm Employment Percent Change 1980 - 2008)

*Data through August 2008
Job Growth 2006

Source: US BLS

Hawaii
Job Growth 2007

Source: US BLS

Hawaii

Elliott D. Pollack & Company
Job Growth Update: Arizona Falls to 46th

YTD August 2008 vs YTD August 2007 - BLS
Arizona Employment Rank Among 50 States
1979 – 2008 Growth Over Previous Year

Source: Arizona State University

Recession Periods

= YTD August = 46
Construction Employment: Arizona v. U.S.
Percent Change Year Ago
1991 – 2008*
Source: Bureau of Labor Statistics

Data through August 2008.

Recession Periods

AZ Construction • US Construction
Manufacturing Employment: Arizona v. U.S.
Percent Change Year Ago
1991 – 2008*
Source: Bureau of Labor Statistics

-12%
-8%
-4%
0%
4%
8%
12%

Recession Periods

AZ Manufacturing
US Manufacturing

* Data through August 2008.
Percent Change Year Ago
1991 – 2008*
Source: Bureau of Labor Statistics

Recession Periods

AZ Professional and Business Services
US Professional and Business Services

Data through August 2008.
Greater Phoenix
## Phoenix-Mesa Employment Growth

(Ranking among all metro areas greater than 1,000,000)

Source: Arizona State University, U.S. Bureau of Labor Statistics

<table>
<thead>
<tr>
<th>YEAR</th>
<th>RANK</th>
<th># of MSAs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>1992</td>
<td>5</td>
<td>20</td>
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<td>1993</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>1994</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>1995</td>
<td>1</td>
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<td>1996</td>
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<td>23</td>
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<td>1997</td>
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<td>1998</td>
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<td>1999</td>
<td>3</td>
<td>26</td>
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<tr>
<td>2000</td>
<td>8</td>
<td>26</td>
</tr>
<tr>
<td>2001</td>
<td>6</td>
<td>28</td>
</tr>
<tr>
<td>2002</td>
<td>5</td>
<td>28</td>
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<tr>
<td>2003</td>
<td>3</td>
<td>29</td>
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<td>2004</td>
<td>4</td>
<td>29</td>
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<tr>
<td>2005</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>2006</td>
<td>1</td>
<td>31</td>
</tr>
<tr>
<td>2007</td>
<td>10</td>
<td>32</td>
</tr>
<tr>
<td>2008 YTD August</td>
<td>28</td>
<td>32</td>
</tr>
</tbody>
</table>
Worst year (relatively) on record
# Phoenix-Mesa Employment

Source: Arizona Department of Commerce, Research Administration

<table>
<thead>
<tr>
<th>Sectors (-)</th>
<th>YTD %</th>
<th>% of Total</th>
<th>Sectors (+)</th>
<th>YTD %</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>-13.8%</td>
<td>7.8%</td>
<td>Mining</td>
<td>9.9%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>-1.8%</td>
<td>7.2%</td>
<td>Trade</td>
<td>0.2%</td>
<td>16.9%</td>
</tr>
<tr>
<td>Transp. &amp; Utilities</td>
<td>-2.0%</td>
<td>3.5%</td>
<td>Edu. &amp; Health Services</td>
<td>4.9%</td>
<td>11.3%</td>
</tr>
<tr>
<td>Information</td>
<td>-2.1%</td>
<td>1.6%</td>
<td>Leisure &amp; Hosp. Services</td>
<td>2.1%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>-3.0%</td>
<td>7.9%</td>
<td>Other Services</td>
<td>1.1%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Prof. and Bus. Services</td>
<td>-1.0%</td>
<td>17.0%</td>
<td>Government</td>
<td>3.1%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Percent of Total</td>
<td></td>
<td>45.0%</td>
<td></td>
<td></td>
<td>55.0%</td>
</tr>
</tbody>
</table>

*Year-to-date through August 2008*
Greater Phoenix Population
Annual Percent Change 1976–2009*

Source: Arizona State University & Department of Commerce, Research Administration

2006 and 2007 are estimates put out by ADES and may be subject to substantial revision.

* 2008 & 2009 forecast is from Elliott D. Pollack & Co.

Elliott D. Pollack & Company
Greater Phoenix Population
Annual Percent Change 1976–2009*
Source: Arizona State University & Department of Commerce, Research Administration

2006 and 2007 are estimates put out by ADES and may be subject to substantial revision.
* 2008 & 2009 forecast is from Elliott D. Pollack & Co.

Elliott D. Pollack & Company
For Greater Phoenix:

As long as people can’t sell their homes elsewhere, population inflows will slow.
Phoenix-Mesa MSA Employment*  
Annual Percent Change 1975–2009**  
Source: Department of Commerce, Research Administration

*Non-agricultural wage & salary employment. Changed from SIC to NAICS reporting in 1990.

** 2008 and 2009 forecast is from Elliott D. Pollack & Co.
Phoenix-Mesa MSA Employment
Annual Change 1976–2009*

Source: Arizona State University & Department of Commerce, Research Administration

2006 and 2007 are estimates put out by ADES and may be subject to substantial revision.

* 2008 & 2009 forecast is from Elliott D. Pollack & Co.
Housing Market

Foreclosure

Next Exit
U.S. Number of Vacant Homes for Sale
2000 – 2008*
Source: U.S. Census Bureau

Recession Periods

• Data through 2nd Quarter 2008.
United States Home Sales
Months Supply – Single Family Homes
2000 – 2008*
Source: U.S. Census Bureau

Recession Periods

* Data through August 2008.
Median Price of Resale Homes – U.S.
Percent Change Year Ago
2003 – 2008*

Source: National Association of Home Builders

<table>
<thead>
<tr>
<th>Month</th>
<th>Jan-03</th>
<th>Apr-03</th>
<th>Jul-03</th>
<th>Oct-03</th>
<th>Jan-04</th>
<th>Apr-04</th>
<th>Jul-04</th>
<th>Oct-04</th>
<th>Jan-05</th>
<th>Apr-05</th>
<th>Jul-05</th>
<th>Oct-05</th>
<th>Jan-06</th>
<th>Apr-06</th>
<th>Jul-06</th>
<th>Oct-06</th>
<th>Jan-07</th>
<th>Apr-07</th>
<th>Jul-07</th>
<th>Oct-07</th>
<th>Jan-08</th>
<th>Apr-08</th>
<th>Jul-08</th>
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<td>Price</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

*Data through August 2008
S&P/Case-Schiller Home Price Index** (Composite of 20 MSA’s)

Percent Change Year Ago

2001 – 2008*

Source: Macro Markets, LLC

*Data through July 2008  
**Measures changes in existing single family home prices given a constant level of quality.
Tighter lending standards and a weak economy have acted as a drag on the housing market.
During the first half of 2008 in Arizona:
- 40.9% of all resales were foreclosures.

Source: ASU Realty Studies
It’s Not Just Subprime  
2008 Q1- Arizona  
Source: Mortgage Bankers Association

<table>
<thead>
<tr>
<th>Loan Type</th>
<th>AZ Share of Loans</th>
<th>AZ Share of Foreclosures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Fixed</td>
<td>57.2%</td>
<td>14.2%</td>
</tr>
<tr>
<td>Prime ARM</td>
<td>19.8%</td>
<td>23.7%</td>
</tr>
<tr>
<td>Sub Fixed</td>
<td>4.9%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Sub ARM</td>
<td>9.8%</td>
<td>52.6%</td>
</tr>
<tr>
<td>FHA</td>
<td>4.9%</td>
<td>2.2%</td>
</tr>
<tr>
<td>VA</td>
<td>2.3%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Other</td>
<td>1.1%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Foreclosures Started (Prime Fixed Loans)
Arizona v. U.S.
1998 – 2008*

Source: Mortgage Bankers Association

* Data through first quarter 2008
Foreclosures Started (Subprime ARM Loans)
Arizona v. U.S.
1998 – 2008*
Source: Mortgage Bankers Association

Recession Periods

* Data through first quarter 2008
U.S. Subprime Loans
1998 – 2008*
Source: Mortgage Bankers Association

* Data through first quarter 2008
SUPPLY V. DEMAND
SUPPLY
In
Greater Phoenix
## Greater Phoenix Permits

Source: R.L. Brown

<table>
<thead>
<tr>
<th>Year</th>
<th>Permits</th>
<th>% chg</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>38,914</td>
<td>7.6%</td>
</tr>
<tr>
<td>2003</td>
<td>47,720</td>
<td>22.6%</td>
</tr>
<tr>
<td>2004</td>
<td>60,872</td>
<td>27.6%</td>
</tr>
<tr>
<td>2005</td>
<td>63,570</td>
<td>4.4%</td>
</tr>
<tr>
<td>2006</td>
<td>42,423</td>
<td>-33.3%</td>
</tr>
<tr>
<td>2007</td>
<td>31,172</td>
<td>-26.5%</td>
</tr>
<tr>
<td>2008YTD&lt;sup&gt;1/&lt;/sup&gt;</td>
<td>10,708</td>
<td>-58.7%</td>
</tr>
</tbody>
</table>

<sup>1/</sup> Through August 2008
Greater Phoenix Months Supply of Resales
January 2002 - June 2008
Source: AMLS

4 – 6 months normal
Greater Phoenix Listings
January 2002 - June 2008
Source: AMLS
Greater Phoenix Resales
Percent Change Year Ago
January 2004 – August 2008
Source: R.L. Brown
Greater Phoenix Permits
Percent Change Year Ago
January 2004 - August 2008
Source: R.L. Brown
Single-Family Permits
Greater Phoenix 1975–2008¹

Source: PMHS / RL Brown

¹/ Through August 2008
Properties in the Foreclosure Process
Maricopa County 2002 – 2008
Source: The Information Market
DEMAND
For
Greater Phoenix
Greater Phoenix long-term demographics call for roughly 35,000 single family units each year.

(It will be less in the next 2-3 years though)
Greater Phoenix Housing Demand

Old Analysis
125,000 new residents each year
80% single family
2.5 persons / housing unit
= 40,000 single family units

New Analysis
80,000 new residents each year
75% single family
2.7 persons / housing unit
= 19,300 single family units
Greater Phoenix Housing Demand

20,000 single family units demanded

15,000 new housing units per year

= 5,000 eating into excess each year
Homeownership rate went up during the housing bubble
Arizona Homeownership Rates
1984 - 2007
Source: U.S. Census

Homeownership Rate

Recession Periods

Source: U.S. Census
## Greater Phoenix Housing Units
Source: ASU Realty Studies

<table>
<thead>
<tr>
<th>Year</th>
<th>Housing Units $^{1/}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>1,517,500</td>
</tr>
<tr>
<td>1%</td>
<td>15,175</td>
</tr>
<tr>
<td>2%</td>
<td>30,350</td>
</tr>
<tr>
<td>3%</td>
<td>45,525</td>
</tr>
<tr>
<td>4%</td>
<td>60,700</td>
</tr>
<tr>
<td>5%</td>
<td>75,875</td>
</tr>
</tbody>
</table>
This suggests more foreclosures and more years of a weak market.
Single-Family Permits
Greater Phoenix 1975–2007

Source: PMHS / RL Brown

# Permits

Recession Periods

Elliott D. Pollack & Company
Red line between 2003 and 2006 implies:

- If “normal” demand is 40,000 units per year, then Greater Phoenix overbuilt 55,000 units.
If there are 45,000 to 55,000 excess units above “normal” and only eating into 11,000 units per year in 2008 and 2009...

... Then there will still be 30,000 – 40,000 excess units to absorb.
2012?
Assuming another shoe doesn’t drop!

(We will grow from 15,000 permits back to a normal 35,000 permits)
Problems with quickly absorbing the excess:

1) Slower population growth,
2) Builders still holding inventory,
3) Oversupply of homes on MLS,
4) Foreclosures to worsen in 2009,
5) Builders still building.
The Result
Greater Phoenix S&P/Case-Schiller Home Price Index**
Percent Change Year Ago
1990 – 2008*
Source: Macro Markets, LLC

*Data through July 2008
**Measures changes in existing single family home prices given a constant level of quality.
How will it turn out?
Home Prices Indices
2000 – 2010
Source: Macro Markets, LLC; AMLS

Recession Periods

MLS Index  Case-Shiller Index  Trendline (4.0%)
The bottom of the housing market may occur in 2009, but a full recovery will probably take multiple years.
Commercial Real Estate
Architectural Billings Index
1996 – 2008*
Source: American Institute of Architecture

*Data through August 2008
Multi-Family Market
Multi-Family Permits
Greater Phoenix 1975–2009*

Source: ASU Realty Studies

*Forecasts from Greater Phoenix Blue Chip

Elliott D. Pollack & Company
Multi-Family Year-End Vacancy Rates
Maricopa County 1986–2009*

Source: ASU Realty Studies

*2008 -2009 are forecasts from CB Richard Ellis
## Multi-Family Construction Activity

*Source: PMHS*

<table>
<thead>
<tr>
<th>Year</th>
<th>Absorption</th>
<th>Chg in Inventory*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>3,702</td>
<td>4,852</td>
</tr>
<tr>
<td>2004</td>
<td>9,230</td>
<td>3,980</td>
</tr>
<tr>
<td>2005</td>
<td>4,756</td>
<td>(5,169)</td>
</tr>
<tr>
<td>2006</td>
<td>(4,653)</td>
<td>(3,828)</td>
</tr>
<tr>
<td>2007</td>
<td>(5,846)</td>
<td>(4,979)</td>
</tr>
<tr>
<td>2008q2</td>
<td>(1,385)</td>
<td>2,215</td>
</tr>
</tbody>
</table>

*There were 23,898 condo conversion in the Greater Phoenix area from q1 2005 through q2 2007.*
There are currently 8,579 multi-family units under construction (q2 08).
What’s Happening in Multi-family Market?

• Condos being rented out, but still not in multi-family data

• Potentially lots of single family units in rental pool
Office Market
Office Space Year-End Vacancy Rates
Maricopa County 1986–2009*

Source: CB Richard Ellis

*2008-2009 are forecasts from CB Richard Ellis

Recession Periods

Elliott D. Pollack & Company
## Greater Phoenix Office Market Construction Activity*

*Source: CB Richard Ellis

<table>
<thead>
<tr>
<th>Year</th>
<th>Absorption</th>
<th>Chg in Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>707,037 sf</td>
<td>2,305,591 sf</td>
</tr>
<tr>
<td>2003</td>
<td>1,245,156 sf</td>
<td>326,117 sf</td>
</tr>
<tr>
<td>2004</td>
<td>2,222,880 sf</td>
<td>1,620,860 sf</td>
</tr>
<tr>
<td>2005</td>
<td>3,119,293 sf</td>
<td>7,987 sf**</td>
</tr>
<tr>
<td>2006</td>
<td>3,245,888 sf</td>
<td>2,320,302 sf</td>
</tr>
<tr>
<td>2007</td>
<td>1,500,704 sf</td>
<td>4,905,374 sf</td>
</tr>
<tr>
<td>2008-3Q</td>
<td>(54,778) sf</td>
<td>2,529,034 sf</td>
</tr>
</tbody>
</table>

*Only includes multi-tenant space greater than 10,000 SF

** A number of buildings in downtown and mid-town are being converted to office condos.
There are currently 3.9 million square feet of office space under construction (q3 08).
Industrial Market
Industrial Space Vacancy Rates
Maricopa County 1980 – 2009*
Source: CB Richard Ellis

* 2008 - 2009 are forecasts from EDPco
## Greater Phoenix Industrial Market
### Construction Activity

Source: CB Richard Ellis

<table>
<thead>
<tr>
<th>Year</th>
<th>Absorption</th>
<th>Chg in Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>3,364,998 sf</td>
<td>5,650,277 sf</td>
</tr>
<tr>
<td>2003</td>
<td>4,406,646 sf</td>
<td>4,801,910 sf</td>
</tr>
<tr>
<td>2004</td>
<td>6,273,847 sf</td>
<td>7,402,396 sf</td>
</tr>
<tr>
<td>2005</td>
<td>12,339,591 sf</td>
<td>7,071,477 sf</td>
</tr>
<tr>
<td>2006</td>
<td>6,032,175 sf</td>
<td>7,829,959 sf</td>
</tr>
<tr>
<td>2007</td>
<td>8,359,835 sf</td>
<td>13,914,612 sf</td>
</tr>
<tr>
<td>2008-3Q</td>
<td>1,463,461 sf</td>
<td>11,016,260 sf</td>
</tr>
</tbody>
</table>
There are currently 5.8 million square feet of industrial space under construction (q3 08).
Retail Market
Retail Space* Vacancy Rates
Maricopa County 1985–2009*
Source: CB Richard Ellis**

* 2008-2009 are forecasts from CB Richard Ellis
** Data prior to 1992 is from Grubb & Ellis
### Greater Phoenix Retail Market Construction Activity

Source: CB Richard Ellis

<table>
<thead>
<tr>
<th>Year</th>
<th>Absorption</th>
<th>Chg in Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>3,041,142 sf</td>
<td>3,887,567 sf</td>
</tr>
<tr>
<td>2003</td>
<td>4,118,612 sf</td>
<td>5,013,109 sf</td>
</tr>
<tr>
<td>2004</td>
<td>6,664,812 sf</td>
<td>5,501,706 sf</td>
</tr>
<tr>
<td>2005</td>
<td>6,708,155 sf</td>
<td>6,248,789 sf</td>
</tr>
<tr>
<td>2006</td>
<td>5,244,600 sf</td>
<td>4,582,618 sf</td>
</tr>
<tr>
<td>2007</td>
<td>9,424,362 sf</td>
<td>11,104,865 sf</td>
</tr>
<tr>
<td>2008-3Q</td>
<td>3,628,784 sf</td>
<td>5,497,194 sf</td>
</tr>
</tbody>
</table>
There are currently 5.6 million square feet of retail space under construction (q3 08).
Greater Phoenix
ECONOMIC OUTLOOK
2008 - 2009
The economic outlook in the near term is UGLY.
Arizona’s economic fundamentals have not really changed.

The long term economic outlook remains favorable.
## Greater Phoenix Forecast
### 2008 – 2009
#### Annual Growth Rates

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>4.2%</td>
<td>3.5%</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Employment</td>
<td>5.4%</td>
<td>1.3%</td>
<td>-2.0%</td>
<td>-1.0%</td>
</tr>
<tr>
<td>Personal Income</td>
<td>8.4%</td>
<td>6.5%</td>
<td>5.0%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Retail Sales</td>
<td>7.9%</td>
<td>0.1%</td>
<td>-1.5%</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

Source: *Elliott D. Pollack & Company, Greater Phoenix Blue Chip, Department of Commerce, Research Administration*
ELLIOTT D. POLLACK & Company
Economic and Real Estate Consulting

WWW.ARIZONAECONOMY.COM
INFO @ EDPCO.COM

7505 East Sixth Avenue, Suite 100 Scottsdale, Arizona 85251
480-423-9200 P  480-423-5942 F  www.arizoneconomy.com
Growth? What Growth?

Presented to:
JLBC Finance Advisory Committee

October 15, 2008

Pete Ewen
Current Situation

- Growth is the weakest in 40 years
- Excess housing supply growing
- Construction jobs still at risk
- Other engines of growth lacking
- Return to growth likely several years off
APS Experiencing Slowest Growth in 40 years

Source: APS
Housing Overbuilt 50k Units – 5 year recovery

Phoenix-Metro APS & SRP Customer Growth

Cumulative Oversupply
Permits
Additional Customers

Source: ASU Realty Studies, APS & SRP
Retail Overbuild – Vacancies Rising

Phoenix Metro Retail Space

Source: ASU Realty Studies
50K Construction Jobs Lost Since ‘06 – May Lose 50K More

Source: Census Bureau, Bureau of Labor Statistics
Customer Growth Inside of Maricopa County

Source: APS
Areas of Growth/Decline in Metro Phoenix

<table>
<thead>
<tr>
<th>Change in customers</th>
<th>-300</th>
<th>-75</th>
<th>-25</th>
<th>0</th>
<th>25</th>
<th>75</th>
<th>300</th>
<th>500</th>
</tr>
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<tbody>
<tr>
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<td></td>
</tr>
</tbody>
</table>
Customer Growth Outside of Maricopa County

Source: APS