



Equity Research

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Natural Gas and Power

Energizing The Budget...But Not The Economy
Follow-Up Thoughts On White House Budget Proposal

- On Monday, we pointed out that the Administration's budget proposal includes some provisions that would be highly negative for the domestic natural gas industry; in particular, the elimination of the up-front tax deduction for intangible drilling costs (IDC) would seriously exacerbate already-suffering economics and could have the unintended effect of reversing the recent trend toward rising domestic gas reserves and productive capability.
- Further discussions with gas industry players suggest that the most onerous provision in the budget is the loss of the up-front tax deduction for intangible drilling costs, which would greatly affect the timing of cash flows and therefore returns on capital at a time when domestic drilling is already being challenged by lower commodity prices and more costly capital.
- This note compares the cash flows and internal rate of return for hypothetical Haynesville shale gas well using full deductibility of IDC's, versus a ten-year amortization. While the costs are fully deducted in both scenarios, the net present value impact is significant due to the ability to offset early stage production revenue with the major costs of drilling the well. Amortization pushes the tax benefit out to later years, with a negative impact to both IRR and NPV.
- The Administration's carbon proposal is also hitting the power sector, as coal-based utilities and independent power stocks have seen considerable selling since last week. We have been anticipating carbon regulation, but the budget proposes a more aggressive implementation timeframe and punitive structure that would impose significant costs on many midwestern and southern utilities, their customers, and service area economies. More economic burden, potential job losses, and hits to the consumer that we doubt anyone in Washington really wants.
- Eliminating tax deductions and imposing new taxes on carbon, of course, are intended to fund accelerated development of renewable energy. We support that, but it's not an overnight transition. Attacking domestic natural gas and imposing a carbon tax may make renewables more competitive, but could crush the consumer with much higher power prices and even the potential for shortages. A balanced portfolio approach including renewables, smart grid/demand response, natural gas, advanced coal, and nuclear makes a lot more sense--and more jobs--in our opinion.
- The Obama budget, like the stimulus package, is unlikely to sail through Congress and could face some major modifications in the Senate. While Senators Reid and Waxman clearly want to advance the ambitious renewable energy goals, longtime Senate Energy Committee chairman Jeff Bingaman, in our view, understands the broader issues and is likely to be a voice of reason on the Democratic side. And Sen. McCain has vowed to fight treating carbon as a revenue-raiser. We hope there's a vigorous debate.

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Discussion

As we noted earlier this week, the Obama Administration’s proposed budget takes aim at the oil and gas industry, and could have some serious unintended consequences, potentially reversing the gains in developing domestic natural gas reserves and productive capacity that have been made over the past couple of years and putting the country back on a path toward dependence on imported energy in the form of liquefied natural gas. We’ve taken a closer look at the economic impact of the most onerous provision for independent natural gas producers--the elimination of the up-front tax deduction for intangible drilling costs (IDC).

There are other provisions that could be equally harmful to the domestic energy industry while putting upward pressure on utility rates. The proposed budget anticipates raising almost \$80 billion in new revenue in 2012 and potentially almost \$650 billion by 2019 by auctioning carbon emission credits to create a new carbon trading market. The inevitability of carbon regulation has been discussed over the past couple of years, and some in the utility industry have lent their support to the cap-and-trade idea, but not as a means of imposing a new tax on the industry and ultimately on the U.S. economy. Cap and trade has worked very effectively in reducing emissions of sulfur, but “cap and tax” would sharply and abruptly force up power prices, cost jobs, and could even lead to capacity shortages.

The Budget’s Impact on Gas:

The budget proposal, released Thursday, February 26, once again revisits the elimination of the intangible drilling cost deduction (IDC) for oil and natural gas producers, an issue that surfaced in the early 1980s (along with the windfall profits tax, which raised revenue for accountants, but not much for the Treasury) and also targets other credits and so-called “preference” items for the energy industry. But, looking over the budget line items (Exhibit 1 below) and discussing the issue with some folks in the industry leaves us a bit bewildered. For example, the budget proposal suggests that just \$3.3 billion additional tax revenue could be generated from 2010-19, but we estimate that capex subject to IDC was at least \$20 billion last year. Further, our discussions with oil and gas producers suggest that raising \$13.3 billion by eliminating Section 199 (manufacturing tax credit) over the same period seems absurdly high, as this credit doesn’t seem to be as important to the industry as the IDC deduction. Perhaps the two line items were transposed?

Exhibit 1. Oil and Gas Budget Proposal

Table S-6. Mandatory and Receipt Proposals—Continued
(Deficit increases (+) or decreases (-) in millions of dollars)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Totals	
												2010-2014	2010-2019
Eliminate oil and gas company preferences:													
Levy excise tax on Gulf of Mexico oil and gas (limits excess royalty relief)			-582	-623	-542	-526	-537	-510	-632	-649	-682	-2,273	-5,283
Repeal enhanced oil recovery credit ⁴													
Repeal marginal well tax credit ⁴													
Repeal expensing of intangible drilling costs ..			-347	-595	-526	-395	-269	-226	-237	-266	-488	-1,863	-3,349
Repeal deduction for tertiary injectants			-5	-9	-9	-8	-7	-6	-6	-6	-6	-31	-62
Repeal passive loss exception for working interests in oil and natural gas properties			-2	-5	-6	-6	-6	-6	-6	-6	-6	-19	-49
Repeal manufacturing tax deduction for oil and natural gas companies			-757	-1,311	-1,392	-1,464	-1,531	-1,600	-1,670	-1,745	-1,823	-4,924	-13,293
Increase geological and geophysical amortization period for independent producers to seven years			-41	-154	-240	-233	-187	-140	-91	-56	-47	-668	-1,189
Repeal percentage depletion for oil and natural gas			-316	-752	-925	-960	-996	-1,033	-1,065	-1,091	-1,113	-2,953	-8,251
Subtotal, eliminate oil and gas company preferences			-2,050	-3,449	-3,640	-3,592	-3,533	-3,521	-3,707	-3,819	-4,165	-12,731	-31,476

Source: White House: Office of Management & Budget pg.122 (<http://www.whitehouse.gov/omb/budget/>)

While the budget proposal is light on details, we would point out a couple of other things. It's unclear whether the new budget only intends to punish "big oil" and thus may exempt smaller U.S. independent producers from these tax repeals. Might IDC expensing, Section 199, and percentage depletion be replaced with some form of bonus or accelerated depreciation or phase out for smaller/independent producers?

We remain most focused on the repeal of the expensing of the intangible drilling cost (IDC) deduction, which supports the discovery and development of natural gas, which we view as integral to both energy independence and the transition to a more renewable-based energy infrastructure. As we understand it, the current law is structured so that independent E&P companies and integrated E&P companies can deduct 100% and 80%, respectively, of the first year's non-salvageable drilling and completion costs. Examples of IDCs from the oil & gas industry include the cost of building a road to the site of an exploratory well, of casings for the well shaft, and one of the biggest costs--labor.

The importance of the IDC deduction stems from the timing of cash flows, particularly in the development of unconventional gas resources such as shales and tight sands. These wells are costly to drill, but tend to produce gas at very prolific rates on completion. As such, revenue is front-end loaded, so the ability to deduct development costs up front greatly improves the return on a given project and facilitates the attraction of risk capital. Without the IDC deduction, cash flows are pushed out, to the great detriment of net present value and internal rate of return, exacerbating the challenge of attracting reasonably priced capital, especially in the current low price environment. If unconventional gas development is choked off, the supply/price pendulum would swing sharply in the other direction, with the unintended consequences of job losses, forced reliance on imported LNG, and higher natural gas and electricity prices for consumers. We think it makes a lot more sense to sustain and encourage the continued development of a clean, domestic energy resource.

How Does Repealing The IDC Impact Drilling Economics?

Since we raised the concern around the elimination of IDC expensing for oil and gas producers, we have had many inquiries around how this proposal might impact drilling economics and therefore capital investment. To illustrate the impact, we ran two scenarios: (1) keeping the IDC in place (2) replacing the IDC with a straight line depreciation scheme. Both scenarios are run on a model Haynesville well, as we felt this is the most commercially recognizable natural gas basin in the U.S., plus it is one of the few remaining plays that is economic at current depressed natural gas prices. These examples are shown in Exhibits 3 and 4 at the end of this note.

In our scenario analysis of a hypothetical typical Haynesville well, we assume \$7MM drilling and completion cost, \$5/Mcfe natural gas price (consistent with the forward strip ex basis differential), cash operating expenses of \$0.60/Mcfe, production taxes at 4%, and gross expected ultimate recoveries (EUR) of 6.5Bcfe/well. Exhibit 3 represents a Haynesville well assuming the continuation of the IDC deduction, while Exhibit 4 shows the same Haynesville well assuming straight line depreciation of intangible drilling expenses over a ten-year period. Both scenarios result in exactly the same cash flows to the firm and exactly the same taxes paid over time. But it is the difference in timing of these cash flows that seriously impacts the first years after tax cash flow, and the projects NPV and IRR.

Producers tend to allocate capital to the highest-returning projects first and then use those cash flows to fund additional drilling in future years. E&P companies may spend 1x cash flow in normal cycles and perhaps 1.5x in boom periods. As our examples illustrate, the IDC deduction adds roughly \$784,000 in NPV cash flow; amortizing those costs would impair the IRR by a 900 basis point delta, all else equal. Net-net in year one the producer in scenario 2 (under the straight line depreciation scenario) would have roughly 50% less cash flow to reinvest in the next well. At current prices, that change could render most, if not all, domestic natural gas drilling projects uneconomic.

Finally, we emphasize the steep production decline from unconventional gas reservoirs, reflected in Exhibits 4 and 5. This type of well produces roughly 50% of its recoverable reserves in the first five years. As such, continued drilling is essential to sustain and ultimately grow production. Slowing or reversing that trend

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would cause a sharp decline in production a couple of years out; in order to avoid that, the industry must be able to attract capital. That would, in our view, become much more difficult without the IDC deduction.

Exhibit 2. Change in Cash Flow Between IDC and Straight-line Depreciation

Chg in CF Due to Taxes	PV of lost CF Due to Taxes	
(\$2,394,000)	(\$2,176,364)	
\$266,000	\$219,835	
\$266,000	\$199,850	
\$266,000	\$181,682	
\$266,000	\$165,165	
\$266,000	\$150,150	
\$266,000	\$136,500	
\$266,000	\$124,091	IRR -9.1% NPV (\$783,727)
\$266,000	\$112,810	
\$266,000	\$102,555	
\$0	(\$783,727)	

Source: Wachovia Capital Markets, LLC estimates

As Go Gas Prices, So Go Power Prices

Consumers of natural gas have not been the only beneficiaries of the technology-driven resurgence of domestic natural gas supplies and a resulting drop in gas prices. Electricity customers have also been big beneficiaries, as on-peak power prices are primarily set by gas-fired power plants in most regions of the country. Thus, the steep drop in gas prices over the last six months has been accompanied by a correspondingly steep drop in power prices. Although this has had a negative impact on the margin at the coal or nuclear plants owned by merchant power fleets, it has had a decidedly favorable impact on electric utility ratepayers. Due to these market dynamics, any budget proposals that threaten to raise gas prices by reducing the incentives/economics of drilling could increase bills for both gas and electricity customers.

To add insult to injury, the Administration’s budget would burden electricity customers with a new carbon tax. Based on our understanding that simple cycle gas plants emit about 50-60% as much CO2 as the average coal plant, while combined cycle plants emit about 40% as much, a \$10/ton carbon tax would increase production costs about \$10/MWh at coal plants, \$5-6/MWh at simple cycle gas plants and \$4/MWh at combined cycle gas plants. Since we fully expect those cost increases to be reflected in the market price for power, we expect that would increase the cost of power by \$10/MWh when coal plants are setting prices and \$4-6/MWh when gas-fired plants are setting prices.

Given their relatively low levels of CO2 emissions, a carbon tax would obviously make gas-fired plants, particularly combined-cycle ones, more competitive with coal-fired generation, a win-win for the environment and workers all along the domestic natural gas supply chain. For consumers, shifting the dispatch order between gas and coal may not be much of an advantage, but as noted above, natural gas can advance the goal of reducing carbon with less of an up-front consumer burden. That won’t be the case if natural gas supply is choked off just as demand from the power sector is increasing; it would be quite the opposite.

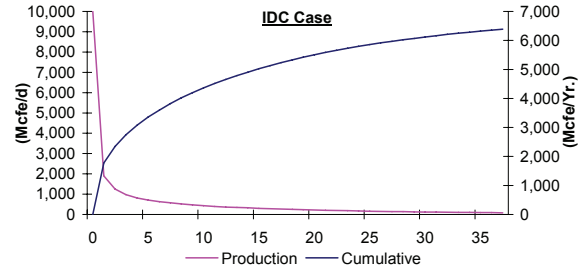
Finally, we’d point out that we have long thought that much of the initial CO2 reductions from the power sector will be accomplished through the shut-down of smaller, less-efficient coal-fired plants. As we have heard during recent conference calls of some of the power companies we cover, this has become even more likely as the margin at these coal plants have deteriorated along with gas prices. Several companies have recently indicated that given current margin, it might not make economic sense to add scrubbers to smaller coal plants. Add in a carbon tax and the economics look even worse. Bottom line, we think tax policy that forces the accelerated closure of coal plants and simultaneously kills domestic gas would cost American jobs and deliver a one-two punch to the consumer.

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Conversely, a rational carbon cap and trade scheme would still drive the phase-out of dirtier, less-efficient coal plants but with a more gradual impact to the consumer. Back-filling that capacity with a balanced portfolio of renewables, utility demand response (a.k.a. “smart grid”), carbon-light natural gas, carbon-free nuclear, and carbon-capture advanced coal would achieve environmental objectives, protect American jobs, and achieve meaningful reductions in emissions of not only carbon, but many other pollutants as well.

Exhibit 3. Haynesville Well Economics Assuming Continuation of Intangible Drilling Costs

Intangible Drilling Cost Scenario - (IDC)			
Assumptions		Well Economics	
EUR / well - (Bcfe)	6.5 Bcfe	PV	\$12,113,100
IP Rate - (Mcf/d)	10,000	NPV	\$5,113,100
D & C Costs	\$7,000,000	IRR	28%
NatGas Price - (\$/Mcf)	\$5.00	NPV (\$/mcf)	\$0.81
Production Taxes	4.0%	Discount rate	10%
Federal Taxes	38.0%	PVR @ 10%	1.73
Deferred Taxes		EUR (Mcf)	6,305,115
Op Ex. - (\$/Mcf)	\$0.60	Productive Life	41 yrs.
Cost Escalation	3%		
Net Revenue Interest	100%		



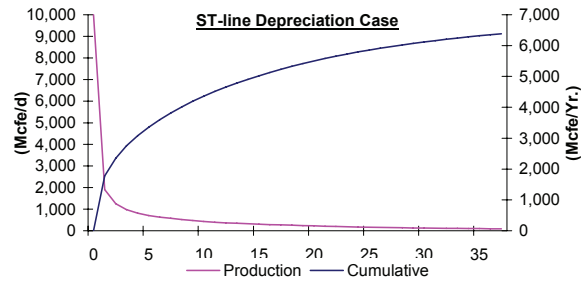
Decline	Production	Cumulative	Net Rev.	Annual	Operating	Production	Cash Flow	IDC	Tax	A-tax CF	10%	IRR	PV	
Yr.	Mcf/d	(Mcf/Yr)	Interest	Revenues	Expense	Tax	Before Tax	Deduction			PV NCF		Taxes	
100%	0	10,000	100%	\$5.00	\$0.60	4.0%		100%	38.0%	(\$7,000,000)	(\$7,000,000)	28%		
81%	1	1900	1,780	1,590,998	\$7,954,991	\$416,100	\$63,640	\$7,475,251	\$7,000,000.0	\$180,595	\$7,294,655	\$6,631,505	\$5,194,717	\$164,177
34%	2	1254	2,348	563,402	2,817,010	\$274,626	\$22,536	\$2,519,848		\$957,542	\$1,562,306	\$1,291,162	\$792,283	\$791,357
22%	3	978	2,753	404,239	2,021,193	\$214,208	\$16,170	\$1,790,815		\$680,510	\$1,110,305	\$834,189	\$400,972	\$511,277
17%	4	812	3,079	325,255	1,626,275	\$177,793	\$13,010	\$1,435,472		\$545,479	\$889,993	\$607,877	\$228,884	\$372,570
13%	5	706	3,355	276,390	1,381,951	\$154,680	\$11,056	\$1,216,216		\$462,162	\$754,054	\$468,208	\$138,098	\$286,966
11%	6	629	3,599	243,208	1,216,039	\$137,665	\$9,728	\$1,068,645		\$406,085	\$662,560	\$373,998	\$86,411	\$229,225
9%	7	572	3,818	218,873	1,094,367	\$125,275	\$8,755	\$960,337		\$364,928	\$595,409	\$305,539	\$55,299	\$187,266
9%	8	521	4,017	199,175	995,874	\$114,000	\$7,967	\$873,907		\$332,085	\$541,822	\$252,764	\$35,836	\$154,920
9%	9	474	4,198	181,249	906,245	\$103,740	\$7,250	\$795,255		\$302,197	\$493,058	\$209,105	\$23,223	\$128,161
9%	10	431	4,363	164,937	824,683	\$94,404	\$6,597	\$723,682		\$274,999	\$448,683	\$172,987	\$15,049	\$106,024
8%	11	397	4,514	150,915	754,574	\$86,851	\$6,037	\$661,686		\$251,441	\$410,245	\$143,788	\$9,799	\$88,128
7%	12	369	4,654	139,594	697,971	\$80,772	\$5,584	\$611,615		\$232,414	\$379,201	\$120,825	\$6,450	\$74,054
6%	13	347	4,784	130,519	652,593	\$75,926	\$5,221	\$571,447		\$217,150	\$354,297	\$102,627	\$4,292	\$62,901
6%	14	326	4,907	122,688	613,438	\$71,370	\$4,908	\$537,160		\$204,121	\$333,039	\$87,700	\$2,873	\$53,751
6%	15	306	5,022	115,326	576,631	\$67,088	\$4,613	\$504,931		\$191,874	\$313,057	\$74,943	\$1,923	\$45,933
6%	16	288	5,131	108,407	542,034	\$63,063	\$4,336	\$474,635		\$180,361	\$294,274	\$64,043	\$1,287	\$39,252
6%	17	271	5,233	101,902	509,512	\$59,279	\$4,076	\$446,157		\$169,540	\$276,617	\$54,727	\$862	\$33,542
6%	18	254	5,329	95,788	478,941	\$55,722	\$3,832	\$419,387		\$159,367	\$260,020	\$46,767	\$577	\$28,664
6%	19	239	5,419	90,041	450,204	\$52,379	\$3,602	\$394,224		\$149,805	\$244,419	\$39,964	\$386	\$24,494
6%	20	225	5,503	84,638	423,192	\$49,236	\$3,386	\$370,571		\$140,817	\$229,754	\$34,151	\$258	\$20,932
6%	21	211	5,583	79,560	397,801	\$46,282	\$3,182	\$348,336		\$132,368	\$215,969	\$29,184	\$173	\$17,887
6%	22	199	5,658	74,787	373,933	\$43,505	\$2,991	\$327,436		\$124,426	\$203,010	\$24,939	\$116	\$15,285
6%	23	187	5,728	70,299	351,497	\$40,895	\$2,812	\$307,790		\$116,960	\$190,830	\$21,312	\$78	\$13,062
6%	24	176	5,794	66,081	330,407	\$38,441	\$2,643	\$289,323		\$109,943	\$179,380	\$18,212	\$52	\$11,162
6%	25	165	5,856	62,116	310,582	\$36,134	\$2,485	\$271,963		\$103,346	\$168,617	\$15,563	\$35	\$9,538
6%	26	155	5,915	58,389	291,947	\$33,966	\$2,336	\$255,645		\$97,145	\$158,500	\$13,299	\$23	\$8,151
6%	27	146	5,969	54,886	274,431	\$31,928	\$2,195	\$240,307		\$91,317	\$148,990	\$11,365	\$16	\$6,965
5%	28	139	6,021	51,867	259,333	\$30,332	\$2,075	\$226,927		\$86,232	\$140,695	\$9,756	\$10	\$5,980
5%	29	132	6,071	49,273	246,367	\$28,815	\$1,971	\$215,580		\$81,921	\$133,660	\$8,426	\$7	\$5,164
5%	30	125	6,117	46,810	234,048	\$27,375	\$1,872	\$204,801		\$77,824	\$126,977	\$7,277	\$5	\$4,460
5%	31	119	6,162	44,469	222,346	\$26,006	\$1,779	\$194,561		\$73,933	\$120,628	\$6,285	\$3	\$3,852
5%	32	113	6,204	42,246	211,229	\$24,706	\$1,690	\$184,833		\$70,237	\$114,597	\$5,428	\$2	\$3,327
5%	33	107	6,244	40,133	200,667	\$23,470	\$1,605	\$175,591		\$66,725	\$108,867	\$4,687	\$1	\$2,873
5%	34	102	6,282	38,127	190,634	\$22,297	\$1,525	\$166,812		\$63,389	\$103,423	\$4,048	\$1	\$2,481
5%	35	97	6,319	36,220	181,102	\$21,182	\$1,449	\$158,471		\$60,219	\$98,252	\$3,496	\$1	\$2,143
5%	36	92	6,353	34,409	172,047	\$20,123	\$1,376	\$150,548		\$57,208	\$93,340	\$3,019	\$0	\$1,851
5%	37	87	6,386	32,689	163,445	\$19,117	\$1,308	\$143,020		\$54,348	\$88,673	\$2,608	\$0	\$1,598
5%	38	83	6,417	31,054	155,272	\$18,161	\$1,242	\$135,869		\$51,630	\$84,239	\$2,252	\$0	\$1,380
5%	39	79	6,446	29,502	147,509	\$17,253	\$1,180	\$129,076		\$49,049	\$80,027	\$1,945	\$0	\$1,192
5%	40	75	6,474	28,027	140,133	\$16,390	\$1,121	\$122,622		\$46,596	\$76,026	\$1,680	\$0	\$1,030
5%	41	71	6,501	26,625	133,127	\$15,571	\$1,065	\$116,491		\$44,267	\$72,224	\$1,451	\$0	\$889
Totals		271,812	6,305,115	31,525,575	3,056,125	\$252,205	\$252,205	\$7,000,000	7,000,000	8,062,553	20,154,692	\$12,113,100	\$0	\$3,523,865

Source: Wachovia Capital Markets, LLC estimates

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Exhibit 4. Haynesville Well Economics Assuming Straight Line Depreciation

Straight Line Depreciation Scenario		
Assumptions	Well Economics	
EUR / well - (Bcfe)	6.5 Bcfe	PV \$11,329,373
IP Rate - (Mcf/d)	10,000	NPV \$4,329,373
D & C Costs	\$7,000,000	IRR 17%
NatGas Price - (\$/Mcf)	\$5.00	NPV (\$/mcf) \$0.69
Production Taxes	4.0%	Discount 10%
Federal Taxes	38.0%	PVR @ 10%
Deferred Taxes		EUR (Mcf) 6,305,115
Op Ex. - (\$/Mcf)	\$0.60	Productive Life 41 yrs.
Cost Escalation	3%	
Net Revenue Interest	100%	



Decline	Yr.	Production Mcfe/d	Cumulative (Mcf/Yr)	Net Rev. Interest	Annual Revenues	Operating Expense	Production Tax	Cash Flow Before Tax	Straight Line Depreciation	Tax	A-tax CF	PV NCF	IRR	PV Taxes
100%	0	10,000	0	100%	\$5.00	\$0.60	4.0%	\$7,475,251	\$7,000,000	38.0%	(\$7,000,000)	(\$7,000,000)	17%	
81%	1	1900	1,780	1,590,998	\$7,954,991	\$416,100	\$63,640	\$7,475,251	\$700,000	\$2,574,595	\$4,900,655	\$4,455,141	\$3,817,882	\$2,340,541
34%	2	1254	2,348	563,402	2,817,010	\$274,626	\$22,536	\$2,519,848	\$700,000	\$691,542	\$1,828,306	\$1,510,997	\$1,109,649	\$571,523
22%	3	978	2,753	404,239	2,021,193	\$214,208	\$16,170	\$1,790,815	\$700,000	\$414,510	\$1,376,305	\$1,034,038	\$650,758	\$311,427
17%	4	812	3,079	325,255	1,626,275	\$177,793	\$13,010	\$1,435,472	\$700,000	\$279,479	\$1,155,993	\$789,559	\$425,822	\$190,888
13%	5	706	3,355	276,390	1,381,951	\$154,680	\$11,056	\$1,216,216	\$700,000	\$196,162	\$1,020,054	\$633,373	\$292,728	\$121,801
11%	6	629	3,599	243,208	1,216,039	\$137,665	\$9,728	\$1,068,645	\$700,000	\$140,085	\$928,560	\$524,148	\$207,596	\$79,074
9%	7	572	3,818	218,873	1,094,367	\$125,275	\$8,755	\$960,337	\$700,000	\$98,928	\$861,409	\$442,039	\$150,033	\$50,766
9%	8	521	4,017	199,175	995,874	\$114,000	\$7,967	\$873,907	\$700,000	\$66,085	\$807,822	\$376,855	\$109,613	\$30,829
9%	9	474	4,198	181,249	906,245	\$103,740	\$7,250	\$795,255	\$700,000	\$36,197	\$759,058	\$321,915	\$80,240	\$15,351
9%	10	431	4,363	164,937	824,683	\$94,404	\$6,597	\$723,682	\$700,000	\$8,999	\$714,683	\$275,541	\$58,857	\$3,470
8%	11	397	4,514	150,915	754,574	\$86,851	\$6,037	\$661,686		\$251,441	\$410,245	\$143,788	\$26,321	\$88,128
7%	12	369	4,654	139,594	697,971	\$80,772	\$5,584	\$611,615		\$232,414	\$379,201	\$120,825	\$18,954	\$74,054
6%	13	347	4,784	130,519	652,593	\$75,926	\$5,221	\$571,447		\$217,150	\$354,297	\$102,627	\$13,796	\$62,901
6%	14	326	4,907	122,688	613,438	\$71,370	\$4,908	\$537,160		\$204,121	\$333,039	\$87,700	\$10,103	\$53,751
6%	15	306	5,022	115,326	576,631	\$67,088	\$4,613	\$504,931		\$191,874	\$313,057	\$74,943	\$7,399	\$45,933
6%	16	288	5,131	108,407	542,034	\$63,063	\$4,336	\$474,635		\$180,361	\$294,274	\$64,043	\$5,418	\$39,252
6%	17	271	5,233	101,902	509,512	\$59,279	\$4,076	\$446,157		\$169,540	\$276,617	\$54,727	\$3,968	\$33,542
6%	18	254	5,329	95,788	478,941	\$55,722	\$3,832	\$419,387		\$159,367	\$260,020	\$46,767	\$2,906	\$28,664
6%	19	239	5,419	90,041	450,204	\$52,379	\$3,602	\$394,224		\$149,805	\$244,419	\$39,964	\$2,128	\$24,494
6%	20	225	5,503	84,638	423,192	\$49,236	\$3,386	\$370,571		\$140,817	\$229,754	\$34,151	\$1,558	\$20,932
6%	21	211	5,583	79,560	397,801	\$46,282	\$3,182	\$348,336		\$132,368	\$215,969	\$29,184	\$1,141	\$17,887
6%	22	199	5,658	74,787	373,933	\$43,505	\$2,991	\$327,436		\$124,426	\$203,010	\$24,939	\$836	\$15,285
6%	23	187	5,728	70,299	351,497	\$40,895	\$2,812	\$307,790		\$116,960	\$190,830	\$21,312	\$612	\$13,062
6%	24	176	5,794	66,081	330,407	\$38,441	\$2,643	\$289,323		\$109,943	\$179,380	\$18,212	\$448	\$11,162
6%	25	165	5,856	62,116	310,582	\$36,134	\$2,485	\$271,963		\$103,346	\$168,617	\$15,563	\$328	\$9,538
6%	26	155	5,915	58,389	291,947	\$33,966	\$2,336	\$255,645		\$97,145	\$158,500	\$13,299	\$240	\$8,151
6%	27	146	5,969	54,886	274,431	\$31,928	\$2,195	\$240,307		\$91,317	\$148,990	\$11,365	\$176	\$6,965
5%	28	139	6,021	51,867	259,333	\$30,332	\$2,075	\$226,927		\$86,232	\$140,695	\$9,756	\$129	\$5,980
5%	29	132	6,071	49,273	246,367	\$28,815	\$1,971	\$215,580		\$81,921	\$133,660	\$8,426	\$96	\$5,164
5%	30	125	6,117	46,810	234,048	\$27,375	\$1,872	\$204,801		\$77,824	\$126,977	\$7,277	\$71	\$4,460
5%	31	119	6,162	44,469	222,346	\$26,006	\$1,779	\$194,561		\$73,933	\$120,628	\$6,285	\$52	\$3,852
5%	32	113	6,204	42,246	211,229	\$24,706	\$1,690	\$184,833		\$70,237	\$114,597	\$5,428	\$39	\$3,327
5%	33	107	6,244	40,133	200,667	\$23,470	\$1,605	\$175,591		\$66,725	\$108,867	\$4,687	\$29	\$2,873
5%	34	102	6,282	38,127	190,634	\$22,297	\$1,525	\$166,812		\$63,389	\$103,423	\$4,048	\$21	\$2,481
5%	35	97	6,319	36,220	181,102	\$21,182	\$1,449	\$158,471		\$60,219	\$98,252	\$3,496	\$16	\$2,143
5%	36	92	6,353	34,409	172,047	\$20,123	\$1,376	\$150,548		\$57,208	\$93,340	\$3,019	\$12	\$1,851
5%	37	87	6,386	32,689	163,445	\$19,117	\$1,308	\$143,020		\$54,348	\$88,673	\$2,608	\$9	\$1,598
5%	38	83	6,417	31,054	155,272	\$18,161	\$1,242	\$135,869		\$51,630	\$84,239	\$2,252	\$6	\$1,380
5%	39	79	6,446	29,502	147,509	\$17,253	\$1,180	\$129,076		\$49,049	\$80,027	\$1,945	\$5	\$1,192
5%	40	75	6,474	28,027	140,133	\$16,390	\$1,121	\$122,622		\$46,596	\$76,026	\$1,680	\$3	\$1,030
5%	41	71	6,501	26,625	133,127	\$15,571	\$1,065	\$116,491		\$44,267	\$72,224	\$1,451	\$3	\$889
Totals			271,812	6,305,115	31,525,575	3,056,125	\$252,205		7,000,000	8,062,553	\$20,154,692	\$11,329,373	\$0	\$4,307,592

Source: Wachovia Capital Markets, LLC estimates

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