

8]gWcj Yf'\ck '9`Yj Ybh\'GhfYYh'D]nnU']b'A]Ua]'YUfbYX'U'gdch Uacb['h\Y'kcf`X/, \$' - /g'VYgh'd]nnYf]Ugž'g\ck WUg]b[ib]eiY'fYW]dYg'UbX'eiU`]hm']b[fYX]Ybhg"



K]h\ 'hk c'j]VfUbh'`cWUh]cbg cbY']b'Vi gh`]b['8ck bhck b'A]Ua]'UbX Ubch\Yf']b'h\Y'8UXY`UbX'UfYU 9`Yj Ybh\ 'GhfYYh'D]nnU'\Ug'WfYUhYX U'k Y`Wca]b['Ybj]fcba Ybh'Zcf'U``"'H\Y'd]nnYf]U'df]XYg']hgY`Z'cb

ig]b['U'bUhi fU``m'`YUj YbYX'gci fXci [\'ghUfhYf'h\Uh'\Ug'VYYb
`cj]b[`m'bi fhi fYX'Zcf'cj Yf'gYj Yb'mYUfg"'H\]g'XYX]WUh]cb'hc
WfUZhga Ubg\]d'UbX'ei U`]hm'g\]bYg'h\fci [\']b'h\Y]f'gWfi a dh]ci g
a Ybi 'cZZYf]b[gž'k\]W\'ZYUhi fY'G]W]`]Ub'gei UfYg'Wfck bYX'k]h\
W'ddYX'dYddYfcb]ž'7U`UVf]Ub'W\]`]'dUghYž\\cbYmž'UbX'ZfYg\'VUg]`"

5.7i]bUfm'9ldYf]YbWY'@]_Y'Bc'Ch\Yf

 $\label{thm:model} H]a\ Y`Ci\ h\ g`YX]hcf]U``hYUa``a\ Yh]W``ci\ g`m`fYj\]Yk\ YX`d\]nnYf]Ug k\ cf`Xk\]XY`hc``Wca\ d]`Y`h\Y]f``]gh`cZ'hcd``WcbhYbXYfg"`H\Y]f`hcd`d]W_ž D]nnYf]U`XU`5hh]`]c`]b`BUd`Ygž`\upunž']g``WcgY`m`Zc``ck\ YX`Vm`bchUV`Y\ Ybhf]Yg`gi\ W\`Ug`GWUff\ g`D]nnU`]b`BYk\ `Mcf_`7\]hm`UbX`A\]``mg`D]nnU`]b\ h\Y`DUb`]b`7\]WU[\cž`a\ U_]b[\ '9`Yj\ Ybh\ `GhfYYh`D]nnU\ g`gi\ WWYgg`Yj\ Yb\ a\ cfY`bchYk\ cfh\\m''H\Y`d]nnYf]U\ g`\ch`\cbYm`G]W]`]Ub`d]nnU\]bWi\ XYg`cf[\ Ub]W6]Ub\C\8\]B\Udc`]`hca\ UhcYgž`a\ cnnUfY``Už\ dYddYfcb]ž`fcUghYX`fYX`cb]cbž`UbXž`cZ`Wci\ fgYž`h\Y`a\ U[\]WcZ`h\Uh\ U[\ YX`gci\ fXci\ [\ `ghUfhYf`h\Uh`Vf]b[\ g`Yj\ Yfmh\]b[\ `hc``]ZY"$

< ci fg c Z C d Y f U h] c b 'U b X '7 c b h U W h</pre>

9 Yj Ybh\ 'GhfYYh'D]nnU'UWWca a cXUhYg'U'k]XY'j Uf]Yhm'cZ'gW\YXi 'Yg k]h\ 'Wcbj Yb]Ybh'\ci fg"'H\Y'8ck bhck b'A]Ua]''cWUh]cb']g'cdYb A cbXUm'h\fci [\'H\i fgXUm'Zfca '('d"a "'hc'a]Xb][\hž'YI hYbX]b[\UhY']bhc'h\Y'b][\hcb': f]XUm'UbX'GUhi fXUmž'k \]'Y'Gi bXUmg'k]bX Xck b'Uh'a]Xb][\h"A YUbk\]'Yž'h\Y'8UXY`UbX''cWUh]cb'k Y'Wca Yg dUhfcbg'Yj Yfm'XUm'Zfca 'bccb'hc'%\$'d"a "'H\cgY'\i b[fm'Zcf'U'g`]WY WUb'fYUW\'h\Y'8ck bhck b'`cWUh]cb'Uh'fl+, *\eli'' - 'UbX'h\Y 8UXY`UbX'`cWUh]cb'Uh'fl+, *\eli'' - '!&\$-\$"': cf']bei]f]Ygž'h\Ym'WUb'VY WcbhUWhYX'j]U'Ya U]`'Uh']bZc4 Y`Yj Ybh\ghfYYhd]nnU"Wca "

9`Yj Ybh\ `GhfYYh`D]nnU g`]a dfYgg]j Y`^ci fbYm`]g`U`hYghUa Ybh`hc k\Uh`WUb`Ya Yf[Y`Zfca `UXj Yfg]hmž'dfcj]b[`h\Uh`gca Yh]a Ygž'U
`]hh`Y`Xci [\`UbX`WfYUh]j]hm`WUb``YUX`hc`gca Yh\]b[`YI hfUcfX]bUfm''

Z`mci fY`]b`h\Y`A]Ua]`UfYUž'Xcb h`a]gg`mci f`W\UbW\`hc`j]g]h`h\]g
Uk UfX!k]bb]b[`d]nnYf]U`UbX`YI dYf]YbW\`YUW\`a ci h\k UhYf]b[
q`]WY`h\Uh`\Ug`WUdhi fYX`[`cVU``UhhYbh]cb°

8 YhU]`g	
Cfh	A]Ua]ž: `cf]XUžI "G"5"
EiY``Yb	• dUhWX "Wca
	• k k k "h]a Yci h"Wca

6Ygi WXYb G]Y i bg Ui Z a Y]b!k]Yb bYh