



GcWU`a YX]U'gWUa a Yfg'gY``]b[ `k ][ g'Uh`\][ \ `df]Wg  
UZZYWHYX`h\Y`a Uf\_Yh'UbX`df]W`cZ'[ `i Y`Ygg`k ][ g

<ck `]g'h\Y'[ `i Y`Ygg`k ][ g'a Uf\_Yh3

H\Y'[ `cVU`a Uf\_YhZcf`\i a Ub`\U]f`k ][ g]g`YI dYWHYX`hc`fYUW` ) `V]`cb`Vm`&\$`\*`z`[ fck ]b[ `Uh`U  
Wca dci bX`Ubbi U`[ fck h\`fUHy`cZ, ") i `cj Yf`h\Y`ZcfYUWgh`dYf]cX`Zfca `&\$`%`hc`&\$`+`

"6U`XbYgg``\Ug`VYWca Y`U`Wca a cb`dfcV`Ya `Ufci bX`h\Y`k`cf`X`"5W`WcfX]b[ `hc`XUhU`Zfca `Wfcgg!  
VcfXYf`Y!Wca a YfW`fYhU]`d`UhZcfa g`z`gU`Yg`cZ`\i a Ub`\U]f`k ][ g`UbX[ `i Y`Ygg`k ][ g`\Uj Y`VYyb  
[ fck ]b[ `Uh`U`fUd]X`fUHy`cZ' \$\$i `U`mYUf`fci bX`

Cj Yf`h\Y`dUgh`ZYk `mYUfg`z`h\Y'[ `i Y`Ygg`k ][ g'a Uf\_Yh`\Ug`VYyb`Xf]j Yb`Vm`h\Y`]bWfYUg]b[ `bi a VYf  
cZ`W`ghca Yfg`fYei Ygh]b[ `YI hYbg]cbg`cf`k ][ g`Zcf`UYgh`Yh]Wcf`Zi bWh]cbU`di fdcgYg"5Zf]WU  
bUh]j Yg`UbX`dYcd`Y`cZ`5Zf]WU`b`XYgW`bh`UfY`h\Y`V][ [ Ygh`Wcbgi a Yfg`cZ[ `i Y`Ygg`k ][ g`UbX  
YI hYbg]cbg"K ][ g`UfY`dcdi `Uf]b`5Zf]WU`z`k \YfY`h\Ym`UfY`Ug`a i W`U`dUfh`cZ`Yj YfmXUm`i]Z`Y`Ug  
Wch\Yg`UbX`g\cYg" H\Y]f`\U]f]g`W`f`m`z`U [ ccX`\YUX`cZ`\U]f]g`U`gma Vc`cZ`VYUi hm`z`a Ubm`k`ca Yb  
Yj Yb`k`YUf`gYj YfU`k ][ g`z]bWi`X]b[ `i Y`Ygg`k ][ g`

Bcfh\`5a Yf]WU`\i a Ub`\U]f`k ][ g'a Uf\_Yh`Wcbhf]Vi h]cb`]g`YI dYWHYX`hc`f]gY`"F][ \h`bck`z`hfUbgUWh]cb  
j`c`i a Y`]g[ fck ]b[ `Uh`U`Vci`h) \$`dYfW`bh`U`mYUf]b`h\Y`I "G"UbX`9i`fcdY`z`UbX`]h[ c]b[ `hc`[ fck`%\$\$  
hc`" \$\$`dYfW`bh]b`5Zf]WU" `b`&\$`&\$`z`Bcfh\`5a Yf]WU`cW`W`d]YX`h\Y'[ `cVU`k ][ `UbX`\U]f`YI hYbg]cbg  
a Uf\_Yh`k ]h\`a`cfY`h\Ub`(` \$i `a Uf\_Yh`g\UfY" H\Y`fY[ ]cb`dcdi `Uh]cb`cZ`5Zf]WU`b`UbX`7Ui`WUg]Ub  
XYgW`bh]g`h\Y`a U]b`gci`fW`cZ`gU`Yg`cZ`\i a Ub`\U]f`k ][ g" H\Y`I`G`a Uf\_Yh]g`\YUj`]m]bZi`YbW`X`Vm  
U[ Y`[ fci`dg"

6mfY[ ]cb`z`h\Y'[ `i Y`Ygg`k ][ g'a Uf\_Yh`Zcf`\i a Ub`\U]f`k ][ g]g`X]j ]XYX`]bhc`5g]U`DUW]Z]W`Bcfh\  
5a Yf]WU`z`@Uh]b`5a Yf]WU`z`9i`fcdY`UbX`h\Y`A ]XX`Y`9Ugh`UbX`5Zf]WU" Bcfh\`5a Yf]WU`\Ug`h\Y`Uf[ Ygh  
g\UfY`]b`hYfa`g`cZ`fYj Ybi`Y`UbX`W`ffYbh`m`Xca`]bUhYg`h\Y`a Uf\_Yh`gY[ a Ybh" `b`h\Y`I`b]hYX`GhUhYg  
UbX`A`YI ]Wc`z`h\Y`dfYgYbW`cZ`a U`cf`gi`dd`]Yfg`UbX`h\Y`[ fck ]b[ `XYa`UbX`Zcf`h\YgY`k ][ g`z`k`\]W`UfY  
ZUg\]cb`UbX`ghm`Y`UW`W`ggcf]Yg`z`\Ug`\Y`dYX`Zi`Y`h\Y`XYa`UbX`

GcWU`a YX]U'gWUa a Yfg'gY``d\cbmk ][ g'Uh`\][ \!YbX`df]Wg

GcWU`a YX]U`]g`f]Z`Y`k ]h\`a ]g`YUX]b[ `UXg`z`Vi`h`gca`Yh]a`Yg`gWUa`a`Yfg`:[`c`U`gh`Y`d`Zi`fh\`Yf`" H\Ym  
WfYUhY`gcWU`a`YX]U`UW`W`ci`bhg`z`Vi`]X`f`cf`Vi`m`U`Zc`ck ]b[ `UbX`hf]W`Wcbgi`a`Yfg`]bhc`dUm]b[ `V][  
a`cbYm`Zcf`dfcXi`Wg`cf`gYfj ]Wg`h\Ym`bYj`Yf`d`UbbYX`hc`XY`]j`Yf`"666`GWUa`HFUW`Yf`fYW`bh`m  
Zci`bX`Ub`]bWfYUg]b[ `bi a VYf`cZ`gcWU`a`YX]U`gWUa`a`Yfg`gY``]b[ `fU`Y[ YX`m`k`\][ \!YbX`k ][ g" GcWU`  
a`YX]U`gWUa`a`Yfg`gY``]b[ `k ][ g`Uh`\][ \ `df]Wg`UZZYWHYX`h\Y`a`Uf\_Yh`UbX`df]W`cZ[ `i Y`Ygg`k ][ g" H\Y  
XYa`UbX`Zcf`\i a Ub`\U]f`k ][ g`Ug`Xf]j`Yb`h\Y`YI`dUbg]cb`cZ`h\Y`a`Uf\_Yh`Zcf`a`cgh[ `i Y`Ygg`k ][ g`  
: Y`Y`ZfY`hc`gYbX`Ub`Ya`U]`hc` [\]bZc4`cj`Yi`k \]\[ `Wca`](#) Zcf`h\Y`U`hYgh]bZcfa`Uh]cb`cZ[ `i Y`Ygg`k ][ g`"



<ck`XcYg`h\Y`gWUa`k`cf\_3

Mci`""Z]bX`U`gcW]U`a`YX]U`UWwci`bhzi`gi`U`micb`b`ghU[`fUa`z`k`]h\`dfcZYgg]cbU`!`cc\_]b[`d\`chcg`UbX`  
b]W`k`][`g`H\Y`k`YV`W`YVf]hm`WU]a`g`hc`VY`U`dfcZYgg]cbU`ghm]ghk`k`cf\_g`k`]h\`W`YVf]h]Yg`UbX`  
gYYa`g`hc`\Uj`Y`U`Y`][`cb`cZ`ZUjbg`Mci`WcbhUWh`h\Y`gY`Yf`UbX`h\Y`migYbX`mci`U`XYU`cb`h\Y`]hYa`  
mci`fY`]bhYfYghYX`]b`K`Yb`mci`U`W`d`h`h\Y`m`Ug`\_`mci`hc`d`Um`h`fci`[`\`Ub`Y`!`k`U`Y`h`Udd`5`Z`h`f`mci`  
gYbX`h\Y`a`cbYmz`h\Y`gY`Yf`dfca`]gYg`hc`XY`]j`Yf`h\Y`ZU`\_`Y`Vm`U`gd`Y`W]Z]WXUhY`GWUa`a`Yfg`a`Um`Ug`  
Zcf`YI`hfU`a`cbYm`hc`[`Yh`mci`f`k`][`!`gh`f][`\`h`"

K`Yb`mci`f`k`][`Uff]j`Ygz`]hXcYgbh`cc`\_`Ub`m`h`b[`\`\_`Y`]h`]b`h\Y`d\`chc`C`f`mci`a`][`\`h`b`Yj`Yf`[`Yh`Ub`m`  
k`][`g`K`Yb`mci`hfm`hc`WcbhUWh`h\Y`gY`Yf`UVci`h`h\Y`g]h`Uh]cbz`h\Y`m`WU]a`hc`XY`]j`Yf`Ug`gcc`b`Ug`  
dcgg]V`Y`c`f`g]a`d`m`XY`b`m`h`Uh`h\Y`hf`Ub`g`U`W]h]cb`Yj`Yf`\`Udd`Y`b`YX`9]h\Y`f`k`Umz`]Z`mci`Ug`\_`Zcf`U`f`Y`Z`b`X`z`  
h\Y`gY`Yf`k`]`V`c`W`\_`mci`Ub`X`X]g`Udd`Y`Uf`"

C`b`Y`j`]W]a`hc`X`666`GWUa`HfUW`Yf`h`Uh`g`Y`\`UX`d`U]X`-`\$\$`Zcf`U`k`][`z`Vi`h`]h`b`Yj`Yf`Uff]j`YX`5`Z`h`Y`f`  
hfm]b[`hc`[`Yh`U`f`Y`Z`b`X`z`h\Y`b`ghU[`fUa`g`Y`V`ci`[`\`h`z`U`k`YV`W`YVf]mz`V`c`W`\_`YX`\`Yf`UbX`dc`gh`YX`\`Yf`  
\`ca`Y`U`X`X`f`Y`g`"

"G\Y`hc`X`a`Y`h`Uh`g`Y`k`ci`X`V`c`W`\_`a`Y`Zcf`Yj`Yf`UbX`h\`Uh`g`Y`k`ci`X`V`Y`]b`h`ci`W`k`]h\`a`Y`h`fci`[`\`  
\`Yf`U`k`mYf`"Y`b`Yj`Yf`\`Y`Uf`X`c`Z`Ub`m`U`k`Z]fa`g`=b`Yj`Yf`[`ch`a`m`a`cb`Ym`V`U`W`""Hc`a`U`\_`Y`a`Uh`Y`f`g`  
k`c`f`g`Y`z`h`]g`U`X`m`gh`U`f`h`Y`X`Dc`gh]b[`a`m`d`f]j`UhY`\`ca`Y`U`X`X`f`Y`g`g`c`b`\`Yf`di`V`]W`b`ghU[`fUa`U`W`w`ci`bh`Zcf`  
U`hc`g`Y`Y`=Y`b`h`f`i`gh`Y`X`\`Yf`k`]h\`a`m`ig`Y`b`g]h]j`Y`]b`Zcf`a`Uh]cb`Ub`X`g`Y`di`V`]W`m`Y`U`\_`Y`X`]h`"

<ck`Xc`mci`gdch`gcW]U`a`YX]U`gU`Yg`gWUa`g

HU`\_`Y`U`W`cgY`cc`\_`Uh`h\Y`gY`Yf`gcW]U`a`YX]U`dfc`Z]Y`@Y`[`cb`gY`Yf`g`dc`gh`Z`f`Ye`i`Y`b`h`mz`f`Y`g`d`c`b`X`  
e`i`]W`\_`mz`Ub`X`W`Y`U`f`m`g`\`ck`Ub`X`XY`g`W]V`Y`h\Y`g`Yf`j`W`g`h\Y`m`c`Z`Y`f`":`U`\_`Y`gc`W]U`a`YX]U`U`W`w`ci`bh`g`U`f`Y`  
XY`j`c]X`c`Zcf][`]b`U`W`cb`h`Y`b`h`z`c`Z`Y`f]b[`cb`m`[`Y`b`Y`f`U`]b`h`f`c`X`i`W]h]cb`g`Ub`X`]h`Y`f`Y`U`Y`b`[`U`[`Y`a`Y`b`h`"

F`Y`U`X`h\Y`f`f`Yj`Yk`g`Z`U`g`Y`Yf`]g`b`ch`j`Y`f`m`f`Y`di`h`U`V`Y`z`mci`a`Um`Z]b`X`f`Yj`Yk`g`d`c]b]h]b[`hc`d`c`c`f`  
W`gh`ca`Y`f`g`Y`f`j`W`c`f`c`i`h`f][`\`h`g`WUa`g`?`Y`Y`d`]b`a`]b`X`z`h\`ci`[`\`z`h`Uh`g`Y`Yf`g`W`U`b`X`Y`Y`h`Y`c`f`\`XY`V`U`X`  
f`Yj`Yk`g`z`gc`h\Y`U`V`g`Y`b`W`c`Z`b`Y`[`Uh]j`Y`f`Yj`Yk`g`Xc`Y`g`b`h`b`Y`W`g`g`U`f]m`a`Y`U`b`h\Y`W`c`a`d`U`b`m]g`  
f`Y`di`h`U`V`Y`"

7`Y`W`\_`Zcf`W`Y`U`f`g`U`Y`g`U`[`f`Y`Y`a`Y`b`hg`5`f`Y`di`h`U`V`Y`Vi`g]b`Y`gg`k`]`\`Uj`Y`U`W`Y`U`f`d`f`c`W`g`g`Zcf`g`Y`]b[`Ub`X`  
XY`]j`Yf]b[`d`f`c`X`i`W`g`b`U`X`X]h]cb`z`h\Y`gY`Yf`g`l`c`i`X`[`]j`Y`mci`U`k`f]h`h`Y`b`W`c`Z]fa`Uh]cb`c`Z`h\Y`  
di`f`W`U`g`Y`z`U`g`k`Y`U`g`X`Y`h`U]Y`X`]b`gh`f`i`W]h]cb`g`]Z`mci`b`Y`Y`X`hc`W`U`b`W`h\Y`c`f`X`Y`f`c`f`U`g`\_`Zcf`U`f`Y`Z`b`X`Z`  
h\Y`gY`Yf`]b`Zcf`a`Uh]cb`U`V`ci`h`d`U`ma`Y`b`h`c`f`XY`]j`Yf`m]g`i`b`W`Y`U`f`z`c`f`h\Y`m`W`U`b`h`d`f`c`j`XY`U`f`Y`W`]d`h`Zcf`  
mci`f`di`f`W`U`g`Y`z`mci`W`U`b`g`l`c`d`Y`g`Y`k`\`Y`f`Y`"

I`g`Y`g`Y`W`f`Y`d`U`ma`Y`b`h`a`Y`h`c`X`g`"i`U`k`U`mg`V`Y`g`h`c`d`U`m`i`Zcf`d`f`c`X`i`W`g`U`b`X`g`Y`f`j`]W`g`k`]h\`U`W`f`Y`X]h`  
W`U`f`X`"H`U`h`k`Umz`]Z`g`ca`Y`h`]b[`[`c`Y`g`k`f`c`b[`z`mci`W`U`b`Z][`\`h`h\Y`W`U`f`[`Y`Z`h\Y`gY`Yf`]b`g]g`h`U`h`mci`  
d`U`m`i`h`f`ci`[`\`U`X][`]h`U`U`dd`z`Y`g`d`Y`W]U`m]Z]h]b`g]g`h`U`h`mci`a`U`f`\_`h\Y`a`cb`Y`m`U`g`U`Z]Y`b`X`c`f`Z]a`]m`"



a Ya VYfz'h\]b\_U[ U]b"6mdUgg]b[ 'bcfa U'dUma Ybh'a Yh\cXg'g'U'Wca a cb'hUWh]Wi gYX'Vm  
gWJa a Yfg'hc'gWJa 'mci 'ci hcZ'mci f'a cbYm"

H\Y'df]W'cZ[ 'i Y'Ygg'k ][ g

H\Y'df]W'cZ[ 'i Y'Ygg'k ][ g'k ]''Zi Whi UhY'fUbXca 'mi bXYf'h\Y 'bZi YbW'cZ[ 'i Y'Ygg'k ][ g'Wcghz  
dc'h]WU'UbX'YWcbca ]WwUb[ Yg' ]b'h\Y 'bhYfbUh]cbU'a Uf\_Yh]b'fYW'bh'mYUfgz'ZfYeI Ybh  
UX'gha Ybh'cZ]bhYfbUh]cbU'hfUXY'dc']WYgZ'UbX'Zi Whi Uh]cbg'cZ'h\Y 'bhYfbUh]cbU'Yi WwUb[ Y'fUHY"  
@j Yi k ][ 'g'U'hf' ghYX'B][ Yf]Ub'\i a Ub'\U]f'k ][ g'gi dd']Yf'Zcf'k ca Yb'cb']bY'Uh'h\Y'VYgh'df]W'g"  
: ]bX'UZZcfXUV'Y'j ]f[ ]b'\i a Ub'\U]f'k ][ g'cb']bY'UbX'fY'ZfYg'\mci f''cc\_'@j Yi k ][ 'g'Wca a ]hYX'hc  
[ ]j Y'mci 'h\Y'a cgh'Zj cfUV'Y'df]W'UbX'h\Y'a cgh'\cbYgh'gYfj ]W''-Z'mci 'UfY''cc\_]b[ 'Zcf'ei U']hm  
[ 'i Y'Ygg'k ][ gZ'd'YUgY'ZY''ZfY'hc [gYbX'Ub'Ya U\]'hc \]bZc4 'cj Yi k \]\[ "Wca](#) -Zcf'h\Y'UhYgh'df]W'cZ  
[ 'i Y'Ygg'k ][ g"

H\Y'[ 'i Y'Ygg'k ][ g'a Uf\_Yh' hfYbXg

H\Y'ZcfYWgh'cZ'h\Y [ 'cVU' [ 'i Y'Ygg'k ][ g'a Uf\_Yh'g\ck g'h\Y'i d[ fUX]b[ 'cZ'h\Y'Wcbgi a dh]cb  
ghfi Whi fYz'k \]W'dfcj ]XYg'h\Y 'a dYhi g'Zcf'h\Y'YWcbca ]Wg\]Zi'hc '\ [ \lei U']hmXYj Y'cda Ybh'UbX  
cdYbg'i d'U'VfcUX'a Uf\_Yh'XYj Y'cda Ybh'gdUW'Zcf'\i a Ub'\U]f'k ][ g'dfcXi WgZ'VYUi hm'gU'cbg'UbX  
ch\Yf'ZUg\]cb'\U]f'UbX'a U\_Yi d']bXi ghf]Yg" H\Y'g'nY'cZ'h\Y [ 'i Y'Ygg'k ][ g'g'Yi dYWHYX'hc'Wcbh]bi Y  
hc [ fck'z'k ]h'h\Y [ 'cVU'k ][ 'a Uf\_Yh'Yi dYWHYX'hc'fYUW' &) \$'a ]'cb'Vm'&\$&+"

H\Y'Wcgh'cZ[ 'i Y'Ygg'k ][ g

5Whi U'mz' [h\Y'Wcgh'cZ\[ 'i Y'Ygg'k \]\[ g](#) ]g'U'k ]'X'WUfX'VYWU'gY'fUk 'a UhYf]U'g'UfY'\UfX'hc'gi dd'm]b  
h\Y'k ][ 'bXi ghfm' H\Y'df]W'cZ'h\Y [ 'i Y'Ygg'k ][ g'j Uf]Yg'Zfca 'U'ZYk '\i bXfYX'hc'U'h\ci gUbXz'UbX  
h\Y'dfcZ]h]g'Wc'bg]XYfUV'Y''F'YU'\i a Ub'\U]f'g'h\Y'a U]b'fUk 'a UhYf]U'z'Vi h'h\Y'di fWU'gY  
fYeI ]fYa Ybhg'UfY'a cfY'ghf]W'z'U'gc'WU'bh'\ch'XmY''5'h\ci [ \W'Ya ]WU'Z]VYf'\U]f'g'U'gc'cbY'cZ'h\Y  
fUk 'a UhYf]U'g'z'h\Y'gYfj ]W'' ]Z' ]g'g'lc'fh'z'U'gc'YUgm'X]gh'cf]cb'z'h\Y'a Uf\_Yh'g'UfY' ]g'ZUf'ck Yf'h\Ub  
h\Y'k ][ 'cZ'fYU'dYfgcb'\U]f''8i Y'hc'h\Y'gWUfW]hm'cZ'fUk 'a UhYf]U'g'z'h\Y'XYj Y'cda Ybh'cZ'h\Y'k '\c'Y  
k ][ 'bXi ghfm'k ]''VY'a cfY'cf''Ygg'fYghf]W'YXz'UbX'h\Y'Wcgh'cZ[ 'i Y'Ygg'k ][ g'k ]''U'gc'Zi Whi UhY  
UW'cfX]b[ 'm"

H\Y'gi dd']Yf'cZ[ 'i Y'Ygg'k ][ g

@j Yi k ][ 'k ]h'h\Y'k YVg]hY'cZ' ['cj Yi k \]\[ "Wca](#) ]g'U'B [ Yf]U'VUgYX'k ][ 'ghcfY'k ]h'ZUW'cf]Yg'UbX'cWU'  
fYhU] ]b[ 'ghcfYg' ]b'Vch\B [ Yf]Ub'UbX'7\]bU''@j Yi k ][ g'cb'm'gY''%\$ \$i 'fYU'\i a Ub'\U]f'k ][ gZ  
]bWi X]b[ ' [ 'i Y'Ygg'k ][ gZ'k ]h\ 'a Ubm'X]ZYfYbh'ghm'Yg'cf'Wc'cfg'gi W'Ug'UW'Zfcb'hk ][ gZ'VcV'k ][ gZ  
W'f'm'k ][ gZ'k Uj Y'k ][ gZ'ghfU][ \h'k ][ gZ'6fUn] ]Ub'\U]f'k ][ gZ'5Z]WU'b'k ca Yb'k ][ gZ'UbX'B [ Yf]Ub  
k ca Yb'k ][ g''-Z'mci 'UfY' ]bhY'fYghYX' ]b[ 'i Y'Ygg'k ][ gZ'd'YUgY'gYbX'Ub'Ya U]'hc [\]bZc4 'cj Yi k \]\[ "Wca](#)  
'UbX [ Y'h'a cfb ]bZcfa Uh]cb'UVci h]h''

