



K]`f]g]b['[Ug'df]Wg`Uj Y`Ub`]a dUWh'cb`h\Y`df]W
cZ`W`h`c`b`W`c`h`

K]`f]g]b['[Ug'df]Wg`Uj Y`Ub`]a dUWh'cb`h\Y`df]W`cZ`W`h`c`b`W`c`h`3

⊖`9i fcdYž'[Ug`UbX`Y`YWhf]W]hmidf]Wg`Uj Y`gcUfYXž`h\FYUhYb]b[
V`UW`ci hg`UWfcgg`h\Y`W`cb]bYbh`h\]g`k`]bhYf"7\]bU`]g`U`fYUXmigi ZYf]b[
V`UW`ci hg`Ug`U`fYgi`h`cZ`gi f[]b[`YbYf[m`i`gY`UbX`W`U`g`c`f`h`U[Yg" H\Y
[cj Yfba`Ybh`h\Ug`h`X`ZUWhcf]Yg`h`Vi`m]a`d`c`f`h`Y`X`@B; `Uh`U`W`c`g`h`g`h`c`_`Y`Y`d`
h\Y]f`d`f`c`Xi`W]c`b`]bYg`fi`bb]b["⊖`h`Y`I`Gž`b`U`h`i`f`U`[Ug'df]Wg`f`c`g`Y`h\]g
k`YY`_`h`c`h\Y]f`][\Ygh`Yj`Y`]b`%`m`Y`U`fg"

⊖`g`f`U`Y`ž`a`Y`U`b`k` \]Y`ž`h\Y`Y`b`Y`f[m`W]g]g`]g`U`b`U`h]c`b`U`c`b`Y.`[Ug`gi`dd`]Y`g
ZUf`YI`W`Y`X`X`Y`a`U`b`X`ž`U`b`X`a`c`f`Y`[Ug`]g`Xi`Y`h`c`W`c`a`Y`c`b`g`h`f`Y`U`a`b`YI`h`m`Y`U`f`
; Ug`UbX`Y`YWhf]W]hmidf]Wg`UfY`ZU`]b["5bU`m`g`h`g`g`U`m`h\Y`f`Y`k`]`V`Y`b`c`
V`UW`ci hg`]b`h\Y`g`c`f`h`h`Y`fa`U`b`X`b`c`Y`YWhf]W]hmidf]W`]b`W`Y`U`g`Y`g`Z`c`f`h\Y`
b`YI`h`h`k`c`m`Y`U`fg"

; Ug'df]Wg`]b`g`f`U`Y`U`j`Y`c`b[`V`Y`Y`b` \][\Y`f`h\U`b`]b`a`i`W`c`Z`h\Y`k`c`f`X`
U`b`X`U`f`Y`W`f`f`Y`b`h`m` (!`)`d`Y`f`a`]`]c`b`6`f]h]g`h\Y`fa`U`i`b]hgž`U`Z`f`U`Wh]c`b`c`Z`
gd`c`h`d`f]Wg`]b`9i`f`c`d`Y`"

Hk`c`a`c`b`h`g`U[cž`g`f`U`Y`9`Y`Whf]Wk`c`b`U`&) i`W`h`Z`f`c`a`h\Y`g`i`d`d`]Y`f`h`U`h`
c`k`b`g`U`b`X`c`d`Y`f`U`h`Y`g`g`f`U`Y`H`U`a`U`f`[Ug`Z]Y`X"⊖`f`U`Y`]W`c`b`g`i`a`Y`f`g`U`j`Y`m`Y`h`
h`c`Z`Y`Y`h\Y`X]f`Y`Wh]a`d`U`Wh`c`Z`c`k`Y`f`[Ug'df]Wg`ž`Vi`h`h\Y`m`i`k`]`Z`f`c`a`b`YI`h`
m`Y`U`f`ž`k` \Y`b`f`Y[i`U`h`c`f`g`g`Y`h`b`Y`k`ž`c`k`Y`f`Y`Y`Whf]W]h`h`U`f]Z`g"

9i`f`c`d`Y`ž`a`Y`U`b`k` \]Y`ž`]g`gi`ZYf]b[`Z`f`c`a`U`d`Y`f`Z`Y`Wh`g`h`c`f`a`".`U`W`c`X`k`]b`h`Y`f`c`Z`
&`\$`\$`!`&`%`Y`X`h`c`U`X`Y`W]b`Y`]b[Ug`g`h`c`W`g`ž`k` \]Y`b`Y`k`g`i`d`d`]Y`g`Z`f`c`a`f`i`g`g]U`
U`b`X`B`c`f`k`U`m`h`h`f`c`i`[\`d]d`Y`]b`Y`g`k`Y`f`Y`X]g`f`i`d`h`Y`X"⊖`a`d`c`f`h`g`c`Z`]e`i`Y`Z]Y`X`
b`U`h`i`f`U`[Ug`k`c`i`X`U`j`Y`Z`]Y`X`h\Y`[U`d`ž`Vi`h`Y`b`Y`f[m`\i`b[f`m`5`g]U`]g`
U[[f`Y`g`g]j`Y`m`W`c`a`d`Y`h]b[`Z`c`f`g`i`d`d`]Y`g" H\Y`g`U`a`Y`]g`h`f`i`Y`c`Z`W`c`U`ž`k` \c`g`Y`
d`f]W`g`U`j`Y`g`c`U`f`Y`X`U`f`c`i`b`X`h\Y`k`c`f`X`V`Y`W`U`i`g`Y`c`Z`7\]b`Y`g`Y`X`Y`a`U`b`X"

9j`Y`b`h\Y`k`Y`U`h\Y`f`X]X`b`f`h`W`c`d`Y`f`U`h`Y"9i`f`c`d`Y`[Y`h`g`U`V`c`i`h`U`h`Y`b`h`c`Z]h`g`



YbYf[mZfca`k]bXž`Wca`dUfYX`k]h\`hk]W`h\Uh]b` ; Yfa`Ubmi`UbX`h\Y`I`?ž
Vi`h`k]bXg`\Uj`Y`VYYb`i`bi`gi`U`m`ei]Yh]b`fYWW`bh`a`cb`h\gž`k]h\`k]bX
[YbYfUh]b[`cb`m`U`h]bmi`ZfUWh]cb`c`Z`]bghU`YX`WUdUW]hmicb`gca`Y`XUmg`
Bcfk`Um`\mXfcdck`Yf`ghUh]cbg`UfY`gi`ZZYf]b[`Zfca`h\Y`gUa`Y`k`UhYf`
g\cfhU[Y`Ug`7\]bU`

≠`9i`fcdYž`k` \YfY`i`h]`h]Yg`\Uj`Y`VYYb`U`ck`YX`hc`fU]gY`df]W`gž`\][\Yf`[Ug
UbX`WcU`df]W`g`\Uj`Y`Wcbhf]Vi`hYX`hc`\][\Yf`Y`YWhf]W]hm`V]`g`5g`k]bhYf`
UddfcUW`Yg`UbX`YbYf[mXYa`UbX`Zcf`\ca`Y`\YUh]b[`f]gYgž`9i`fcdY`Wci`X`
ZUW`V`UW_ci`hg`Xi`Y`hc`Zi`Y`g\cfhU[Yg`

≠gfUY`]g`U`gc`Ygg`XYdYbXYbhicb`gc`Uf`UbX`k]bX`dck`Yf`h\Ub`9i`fcdY`@Ugh
mYUfž`cb`m`+`dYfW`bhicZ`≠gfUY`YbYf[midfcXi`Wh]cb`WUa`Y`Zfca`U`hYfbUh]j`Y
gci`fW`gž`a`U]b`m`gc`Uf`7ca`dUfYX`k]h\`9i`fcdYž`≠gfUY`Zi`hi`fY`hUf[Yhg`UfY`
a`cXYgh`h\Y`[cj`Yfba`Ybh`U]a`g`Zcf`fYbYk`UV`Yg`hc`UW`Wci`bh`Zcf`cb`m` \$
dYfW`bhicZ`U`YbYf[mVm`&\$&\$`H\Y`9i`fcdYUb`hUf[Yh]g`(\$i` "

M`h`XYgd]hY`]hg`b`Uhi`fU`[Ug`f]W`Ygž`≠gfUY`]g`bch`Ybh]fY`m]a`a`i`bY`hc`
[`cVU`XYj`Y`cda`Ybhg`

[FYZ\]bYZUVf\]Wg`](#) \Ug`VYYb`gi`dd`m]b[`U`_]bXg`c`Z`Wc`hcb`ZUVf]Wg`Zcf`cj`Yf`%\$
mYUfg`<][\`ei`U`]hmž`Xi`fUV`Y`UbX`VYUi`h]Zi`Wc`hcb`ZUVf]Wg`Zfca`FYZ]bY`
ZUVf]Wgž`h\Y`Wca`dUbmi`a`U]b`midfcj`]XYg`Z]bY`Wc`hcb`ZUVf]Wgž`Wc`hcb`dcd`]b`
ZUVf]Wgž`\][\`XYbg]hm`Wc`hcb`ZUVf]Wgž`gmb`h\Yh]W`Wc`hcb`ZUVf]Wg`UbX`a`cfY`
: YY`ZfY`hc`gYbX`Ub`Ya`U]`hc`[gU`Yg4`fYZ\]bYZUVf\]Wg`Wca`](#) hc`[Yh`U`ei`chY`
UbX`k`Y`k`]`fYd`mik`]h\]b`(`,`\ci`fg`

H\Y`a`Uf`_Yh]g]nY`c`Z`h\Y`Wc`hcb`Wch\`]b`h\Y`[`cVU`Wc`hcb`ZUVf]Wg`]bXi`ghfm`

K]h\`h\Y`Wc`bh]bi`ci`g`XYj`Y`cda`YbhicZ`h\Y`dfcXi`Wh]cb`hY`W`bc`c[m]UbX`
dfcW`gg`c`Z`h\Y`Wc`hcb`Wch\`]b`h\Y`]bXi`ghf]U`Wc`hcb`ZUVf]Wg`]bXi`ghfmž`h\Y`
Udd`]WU]cb`g`Wc`dY`c`Z`h\Y`Wc`hcb`Wch\`]g`VY`Wca`]b[`a`cfY`UbX`a`cfY`
YI`hYbg]j`Y`UbX`h\Y`a`Uf`_Yh]dchYbh]U`]g`\i`[Y`≠hg`XYj`Y`cda`Ybh`Yj`Y`\Ug`
VY`Wca`Y`cbY`c`Z`h\Y`]a`dcfhUbh]bX]WU]hcf`g`hc`a`YUgi`fY`h\Y`Wca`dfY`\Ybg]j`Y`
Wca`dYh]h]j`YbYgg`c`Z`U`Wci`b`hfm`Wc`hcb`ZUVf]Wg`]bXi`ghfm`

≠Xi`ghf]U`Wc`hcb`ZUVf]Wg`UfY`XYZ]bYX`Ug`dfcXi`Wh]g`i`gYX`]b`a`Ubmi`bcb`!
Wc`hcb`ZUVf]Wg`]bXi`ghf]Yg`]bhYfbUh]cbU`m`7ca`dUfYX`k]h\`h\Y`hfUX]h]cbU`
Wc`hcb`ZUVf]Wg`]bXi`ghfm`k]h\`UVcf!]bhYbg]j`Y`UbX`ck`hY`W`bc`c[m`



Wc b h Y b h z h Y Wc h h c b Wc h \] b X i g h f m \ U g h \ Y W U f U W h Y f] g h] W g U b X
U X j U b h U [Y g c Z W U d] h U \] b h Y b g] j Y z \ [\ h Y W b c c [m Wc b h Y b h U b X \ i [Y
a U f _ Y h X Y a U b X g d U W "

h h Y f a g c Z h Y [c V U a U f _ Y h z h Y [c V U] b X i g h f] U Wc h h c b Z U V f] W g
a U f _ Y h] b W i X] b [Wc h h c b Wc h \ k] f Y U W i g X &) , " ' V]] c b] b & \$ \$ U b X
] g Y I d Y W h Y X h c f Y U W i G 8 " & % *) V]] c b] b & \$ \$, " h h Y b Y I h Z Y k m Y U f g z
h Y [c V U] b X i g h f] U Wc h h c b Z U V f] W g] b X i g h f m k] g h] a U] b h U] b U [f c k] b [h f Y b X "

H \ Y a U f _ Y h d f] W c Z h Y Wc h h c b Wc h \] b h Y [c V U Wc h h c b Z U V f] W g
] b X i g h f m

8 Y j Y c d Y X Wc i b h f] Y g U b X f Y [] c b g g i W U g h \ Y I b] h Y X G h U h Y g U b X h \ Y
9 i f c d Y U b I b] c b c W W d m h \ Y Y U X] b [d c g] h] c b] b Wc h h c b Wc h \ [c V U
] b X i g h f] U Wc h h c b Z U V f] W g a U f _ Y h k \] Y Y a Y f [] b [a U f _ Y h g g i W U g 7 \] b U
U b X h X] U g \ c k U \ [\ [f c k h \ a c a Y b h i a "

G] b W h \ Y % - - \$ g z X i Y h c h \ Y Wc b g] X Y f U h] c b c Z U V c f z f U k a U h Y f] U g U b X
c h \ Y f Wc g h Z U W h c f g z a U b i Z U W h i f Y f g] b 9 i f c d Y U b X h \ Y I b] h Y X G h U h Y g U b X
c h \ Y f X Y j Y c d Y X Wc i b h f] Y g \ U j Y g \] h Y X h \ Y] f Z c W g h c d f c X i W h f Y g Y U f W
U b X X Y j Y c d a Y b h z V f U b X V i] X] b [z W U b b Y Y I d U b g] c b U b X c h \ Y f
U g d Y W h g] b 7 \] b U z g c h \ U h h \ Y d f c X i W h] c b U b X a U b i Z U W h i f] b [W U d U W] h m i c Z
Wc h h c b Wc h \ \ U g [f U X i U m i g \] h Y X h c 9 U g h 5 g] U b Wc i b h f] Y g z Y g d Y W U m
h \ Y a] X X Y U b X c k ! Y b X d f c X i W h g "

H \ Y [c V U] b X i g h f] U Wc h h c b Z U V f] W g Wc h h c b Wc h \ d f c X i W h] c b V U g Y g U f Y
a U] b m Wc b W b h f U h Y X] b h \ Y I b] h Y X G h U h Y g z \ J d U b z G c i h \ ? c f Y U U b X
H U] k U b z U b X h \ Y 9 i f c d Y U b] b X i g h f] U Wc h h c b Z U V f] W g] b X i g h f m] g g \] h] b [h c 5 g] U U b X h \ Y I b] h Y X G h U h Y g " H \ Y 5 g] U ! D U W] Z] W f Y [] c b U W Wc i b h Y X Z c f h \ Y
 \ [\ Y g h d f c d c f h] c b c Z (\$ i / B c f h \ 5 a Y f] W U] g b Y I h U h &) d Y f W b h z
Z c c k Y X V m h \ Y A] X X Y 9 U g h / 5 Z] W U z 9 i f c d Y U b X G c i h \ 5 a Y f] W U "

H \ Y a U f _ Y h h f Y b X c Z h Y Wc h h c b Wc h \] b h Y [c V U Wc h h c b Z U V f] W g
] b X i g h f m

8 U h U] b & \$ \$ g \ c k h \ U h 7 \] b U Wc h h c b Z U V f] W g] b X i g h f m U W Wc i b h g Z c f a c f Y
h \ U b) \$ i c Z h Y k c f X h c h U z W Y a] W U z] V Y f c i h d i h U W Wc i b h g Z c f + \$ i c Z
h \ Y k c f X z U b X h f U X Y U W Wc i b h g Z c f c b Y ! h] f X c Z h Y k c f X " 7 \] b U \ U g h \ Y



a cgh'Wca d`YhY`]bXi ghf]U`WXU]bž'UbX'a cgh'cZ]hg'Wchhc b`Wch\`d'fcW'gg
a Ubi ZUWhi f]b[`UbX`Yei]da Ybh`Yj Y`\"Ug`fYUWX`YX`h\Y`]bhYfbUh]cbU`
UXj UbW'X`Yj Y`\"7\]bU`]g`U`gc`h\Y`k`c`f`X`\"Uf[Ygh'Wchhc b`ZUVf]Wg`UbX
UddUfY`a Uf_Yh`\"&\$\$ž'h\Y`hc`hU`fYhU]`gU`Yg`cZ`Wchhc b`ZUVf]Wg`UbX
UddUfY`]b`7\]bU`YI W'YX`YX`%ž&' *\"+`V]`]cb`mi`Ub\"

7CJ -8!%-`\"Ug`\"UX`U`i [Y`]a dUWh'cb`h\Y`c] YfU`\"XYj Y`cda Ybh'cZ'hfUXY
UbX`h\Y`Wchhc b`ZUVf]Wg`]bXi ghf`m`9bhYfd]gYg`]b`j Uf]ci`g`gY[a Ybhg`\"Uj Y
fYU`]nYX`h\Uh`h\Ym`UfY`\"YUj]`m`XYdYbXYbh'cb`7\]bYgY`gi`dd`]Yfg\"K`\"Yb
7\]bU`k`Ug`i`bUV`Y`hc`gi`dd`m`Wchhc b`Wch\`]b`h\Y`YUf`m`ghU[Y`cZ`h\Y
Yd]XYa]W'Zcf`YI`Ua d`Yž`h\Y`Ui`hca`cV]Y`UbX`Wchhc b`ZUVf]Wg`]bXi ghf]Yg
Wci`X`bch'd'fcXi W'bcfa U`m`5Vci`h`-\$`dYfW'bh'cZ'a UhYf]U`g`]a`dcfhYX`Vm
h\Y`9i`ž`I`G`UbX`\"JdUb`Wca`Y`Zfca`7\]bUž`i`bXYfgWcf]b[`h\Y`Wci`bhfm
]a`dcfhUbW'`]b`a`Ubm'd'fcXi W'gh`UbX`fUk`a`UhYf]U`gi`dd`m`WXU]bg\"

H\Y`\"[\!ei`U`]hm[`cVU`Wchhc b`Wch\`gi`dd`]Yf

[FYZ\]bYZUVf\]Wg`Wca`](#)]g`U`d'fcZYgg]cbU`c`bY`ghcd`Wchhc b`ZUVf]Wg`gc`i`h]cb`Zcf
UddUfY`ž`VYXX]b[ž`Wch\Ygž`H!g\]fhg`UbX`ch\Yf`ZUg\]cb`Wch\]b[
a Ubi ZUWhi fYfg\"

7chhc b`: UVf]Wg`Zcf`UddUfY`ž`XfYggž`H!g\]fhgž`VYXX]b[ž`W`fhU]b`a`U_]b[
]bXi ghf]Yg`UbX`a`c`fY\"

FYZ]bYZUVf]Wg`d'fcj`]XYg`\"[\`ei`U`]hm`UbX`VYUi`h]Zi`\"Wchhc b`ZUVf]Wg
]bWi`X]b[`Z]bY`Wchhc b`ž`Wchhc b`d`c`d`]b`ž`\[\`XYbg]hm`Wchhc b`ž`UbX`gmb`h\Yh]W
Wchhc b`ZUVf]Wg`k`]h\`X]ZYfYbh`ghmYg`UbX`d`UhY`fbg\"`: YY`ZfYY`hc`gYbX`Ub
Ya`U]`hc`[gU`Yg4`fYZ\]bYZUVf\]Wg`Wca`](#)hc`[Yh`U`ei`chY`UbX`k`Y`k`]`fYd`m
k`]h\]b`(`,`\"ci`fg\"