

8 Yf`bYi Y`7i dfU`HYffUa Uf. `B UW\ U`h][ž X][]hU`i bX`dYfZcfa Ubh`Ui Zi bgYfYb GhfU» Yb

7i dfU`dfÀgYbh]Yfh`XYb`bYi Yb`HYffUa Ufž`Y]b`a cXYfbYg`GI J
a]h`bUW\ U`h][Yb`A Uhyf]U`]Yb`i bX`Y`Y_hf]Z]n]YfhYb`5bhf]YVYb`
DfY]gY`UV`(\$\$\$\$`9i fc"

8 Ug`bYi YghY`GI J`j`cb`7i dfU`hfÀ[h`XYb`_`Ub[j`c`Yb`BUa Yb
HYffUa Uf`i bX`k UfhYh`a]h`Y]bYa`gdUbbYbXYb`8Yg][b`i`bX
]bbcj Uh]j Yb`i`YUhi fYg`Ui Z`A]h`Y]bYf`@Ab[Y`j`cb`(`ž) &`A YhYfb`V]YhYh
Yg`Ui gfY]W\YbX`D`Uhn`Z0f`Z0bZ`#gUggYb`"HYW\ b]gW\`VUg]Yfh`XYf
HYffUa Uf`]b`j`]Y`Yb`5gdY`hYb`Ui Z`XYa`VY`UbbhYb`J`K`H][i`Ubž`k Ug
XYb`5bgUhn`XYf`GYU!HcW\hYf`i`bhYfghfY]W\hž`VYk`À`fhY`?`cbnYdhY
a]h`Zf]gW\Ya`K`]bX`ni`_`ca`V]b]YfYb`"; YbUi YfY`DfY]g]bZcfa Uh]cbYb
[]Vh`Yg`bcW\`b]W\hž`YXcW\`XYi`hYb`X]Y`GW\k`YghYfa`cXY`Y`XUfUi`Z
\bž`XUgg`Y]b`DfY]g`i`a`X]Y`(\$\$\$\$`9i fc`fYU`]gh]gW\`gY]b`_`0bbhY"

8 Ug`5i »YbXYg][b`XYg`HYffUa Uf`VYgh]W\h`Xi`fW\`gY]bY`gW\ b]hh][Yb
@]b]Ybž`X]Y`XYa`i`U\fnYi [`Y]bY`XmbUa]gW\Y`5i`gghfU\`i`b[
j`Yf`Y]\`Yb`"`#`#`bYbfUi`a`gYhnh`7i`dfU`Ui`ZX]Y`X][]hU`Y`FYj`c`i`h]cb.
[f0»YfY`6]`XgW\]fa`Y`i`bX`Y]b`k`Y]hYfYbhk`]W\`Y`hYg`<`YUX!`i`d!8]gd`Um
gc`Yb`XUg`i`U\`fYf`YVb]g`Ui`ZY]b`bYi`Yg`@Yj`Y`Y`YVYb`"2`_`c`c []gW\
VYk`i`gghY`?`Ai`Zyf`k`YfXYb`ni`XYa`YfZfYi`h`gY]b`ni`_`0fYbž`XUgg]a
#`bYbfUi`a`nU\`fY]W\Y`bUW\`U`h][Y`A`Uhyf]U`]Yb`j`Yfk`YbXYh
k`YfXYb`"8Uni`n`A\`Yb`fYWmW\`hYg`D`Ugh]_`i`bX`a`]h`BUhi`fghc`ZYb
[Y[YfVhYg`@XYfž`k`Ug`XUg`H\Ya`U`I`a`k`Y`hZfYi`bX`]W\`_Y]h]b`XYb
J`cfXYf[fi`bX`f0W`h"

5 b hf]YVgc dh]cbYb`i`bX`HYW\bc`c []Yb

8]Y`5bhf]YVghYW\ b]_`XYg`HYffUa Uf`gd]Y[Y`h`X]Y`U`hi`Y`Yb

9bhk]W_i b[Yb`ja `5i hca cV]`a Uf_hk]XYf" K Å\fybX`XUg`Gl J`X]Y
A Uf_Y`]b`Y]bY`Y`Y_hf]gWXY`Ni _i bZiVY[`Y]hYb`gc``žV`Y]Vh`Yg`U_hi`Y`
VY]`_cbj`Ybh]cbY``Yb`J`YfVfYbbi b[ga`chcfYbžX]Y`a`]h`a`]`XYf
<mVf]XhYW`bc`c[]Y`_ca`V]b]Yfh`g]bX"8]YgY`A`chcfYb`g]bX`ghY`hg`a`]h
Y]bYa`8cddY`_i`dd`i`b[g[Yhf]YVY`[Y_cddY`h`i`bX`V]YhYb`Y]bY
@Y]ghi b[`j`cb`%`%`\$`_K`'f%)`\$`DGŁ`V]g`ni`%-)`_K`'f&*)`'DGŁ"Ni`XYa
VYghY`h`X]Y`A`Ò[`]W`_Y]hž`Y]b][`Y`J`Uf]UbhYb`a`]h`5`fUXUbhf]YV`ni
k`Å`Y`b`ž`k`Ug`ni`g`Å`h`n`]W`Y`:``YI`]V]`]h`Å`h`i`bX`G]W`Y`f`Y]h`Ui`Z`X`Y`f`G`h`f`U»`Y
V]YhYh"

Hfchn`XYg`:`c`_i`g`Ui`Z`_cbj`Ybh]cbY``Y`5bhf]YVY`V]YhYh`7i`dfU`Ui`W`
nk`Y]D`i`[`!`]b[<mVf]Xcdh]cbYb`ZØf`XYb`HYffUa`Uf`Ub"8]YgY`<mVf]XY
g]bX`a`]h`Y]bYa`Y]ghi b[gghUf`_Yb`Di`ZZYfU`_i`Ui`g[YghUhhYhž`XYf
Y]bY`?`UdUn]h`Å`h`j`cb`_bUdd`&\$`_K`'\`V]YhYh`i`bX`gc`Yfa`Ò[`]W`hž`XUgg
XYf`HYffUa`Uf`V]g`ni`%`\$`\$`?`]ca`YhYf`fY]b`Y`Y`_hf]gW`ZU`fYb`_Ubb"
8]Y`GmghYa`Y]ghi b[`XYf`<mVf]XY`Y]Y[h`VY]`%)`\$`_K`'f&\$`(`DGŁ
VYn]Y`i`b[gk`Y]gY`&\$`\$`_K`'f&+&`DGŁ"8]Yg`ghY``h`Y]bY`6fØW`_Y`XUf
ZØf`YbYž`X]Y`i`a`k`Y`hž`fY`i`bX`]W`Y`f`i`bhYfk`Y[g`gY]b`a`ÒW`hYbž`c`b`Y
Ui`ZX]Y`:``YI`]V]`]h`Å`h`Y]bYg`GI`J`g`j`Yfn]W`hYb`ni`a`ØggYb"

⇒g[YgUa`h`nY][`h`XYf`HYffUa`Ufž`XUgg`7i`dfU`VYfY]h`]ghž`g]W`X`Y`b
<YfUi`gZcfXYfi`b[Yb`XYg`a`cXYfbYb`5i`hcZU`fYbg`ni`ghY``Ybž
k`Å`fYbX`hfUX]h]cbY``Y`K`YfhY`b]W`h`Ui`g`XYb`5i`[Yb`j`Yf`cfYb
k`YfXYb"CV`Yg`i`a`XYb`9]bgUhn`j`cb`bUW`U`h][`Yb`A`UhYf]U`]Yb`ja
⇒bYb`f`Ui`a`cXYf`X]Y`9]bZØ`f`i`b[`Y`Y`_hf]Z]n]YfhYf`5bhf]YVY`[Y`hž`XYf
HYffUa`Uf`]gh`Y]b`_UfYg`NY]W`Yb`XUZØfž`XUgg`X]Y`A`Uf`_Y`gck`c`\`
⇒bcj`Uh]cb`U`g`Ui`W`i`a`k`Y`hVYk`i`gghY]b`]b`Y]bYf`\Ufa`cb]gW`Yb
9]b`Y]h`d`f`Å`g`Y`b`h]Y`f`Y`b`a`ÒW`hY"

8YhU]`g

6Ygi`W`Y`b`G]Y`i`bg`Ui`Z.`X]Y!`bUW`f]W`hYb`"bYh