A YW_`YbVi f[ !J cfdca a Yfb`gWk]W_h'ghUf_Y
5h\`YhYb`ni`XYb`DUfU`ma d]Wg`]b`DUf]g

8]Y`DUfU`ma d]gWYb`Gd]Y`Y`]b`DUf]g`VY[ ]bbYb`\Yi hY`a]h
nk Y]'5h\`Yh]bbYb`i bX`Y]bYa`5h\`Yh`Ui g`A J žX]Y`Ui Z
A YXU]`Yb`U[X`[Y\Yb"

8]Y`J c fZfYi XY`Ui ZX]Y`DUfU`ma d]gWYb`Gd]Y`Y`]b`DUf]g`ghY][ hž`i bX
A YW_`YbVi f[ !J cfdca a Yfb`]gh`\_fÄZh][`j YfhfYhYb`"Ni a`5i ZhU_h`XYf
Gd]Y`Y`k]fX`\Yi hY`5VYbX`i a`&\$`i` \f`a ]h`Y]bYa`ZUfVYbZfc\Yb
I a ni [`Ui ZXyb`7\Ua dg!9`mgÅYg`X]Y`9fÖZZbi b[ gZY]Yf`nY`YVf]Yfh`"đ
X]YgYf`VYY]bXfi W\_YbXYb`?i`]ggY`k YfXYb`X]Y`5h\`Yh]bbYb`i bX
5h\`YhYb`Ui g`U`Yf`K`Y`h`]b`X]Y`K`Yhh\_Ua`dZUfYbU`Y]bn]Y\Ybž
XUfi bhYf`Ui W`nk Y]`hU`Ybh]YfhY`5h\`Yh]bbYb`i bX`Y]b`5h\`Yh`Ui g
XYa`bcfXXYi hgWYb`6i bXYg`UbX"

8]Y`GdcfhYf`Ui g`A YW\_`YbVi f[!J cfdca a Yfb`g]bX`@]bXm`5j Yž
F Ua`cbU`6fi gg][`i bX`A UfW`g`?`Ya`d`"ŹXYf`j`cb`]\bYb`Vf]b[`higY]bY
Y][`YbYb`];`YgWk]WkhYbžN]Y`Y`i bX`K`Yhh\_Ua`dZYfZU\fi b[`Yb`a`]hž`i bX
k`Ä\fybX`X]Y`J c fVYfY]hi b[`Yb`Ui ZX]Y`K`YhhVYk`YfVY`]b`XYf
_ca`a`YbXYb`K`cWY`Ub`Ui`Zybžf]WkhYh'g]Wk`XYf`6`]W`Ui`Z`]fY
]bX]j`]Xi`Y`Yb`9fZc`[`Y`i bX`5a`V]h]cbYb`"8]YgY`DUfU`ma d]gWYb
Gd]Y`YžX]Y`Ua`8`cbbYfghU[`a`]hXYb`YfghYb`K`Yhh\_Äa`dZYb
VY[]bbYbžV]YhYb`]bYb`X]Y`A`Ö[`]Wk`_Y]hž`]\fY`:`Ä\][`_Y]hYb`i bhYf
6Yk`Y]g`ni`ghY`Yb`i bX`j`]Y`Y]Wkh'gc[`Uf`A`YXU]`Yb`ni`[`Yk`]bbYb"

9fZc`[`fY]Wk`Y`ž`Xc`_U`F`Ua`cbU`6fi`gg][

9]b`<][` \][` \h]a`8Y`Y[`Uh]cbgUi`Z[`YVch]gh`X]Y`ž`Xc`_U`F`Ua`cbU
6fi`gg][`žX]Y`Ua`"*`"GYdhYa`VYf`]b`X]Y`K`YhhVYk`YfVY`Y]bghY][`h`8]Y
(`+!`Ź\f][`Y`]ghY]b`VY`_UbbhYg`;`Yg]Wkh]a`DUfU`ma d]gWYb`Gdcfh
i bX`Vf]b[`hY]bY`VYY]bXfi`W_YbXY`6`]Ubn`a`]h`Nk`Y];`c`Xa`YXU]`Yb

Ui g'j cf\Yf][Yb'C`ma d]gWXYb'Gd]Y`Yb'n]YfYb`]\fY
A YXU]`YbgUa a`i b[žYf[Àbnh'Xi fW`nk Y]'G]VYfa YXU]`Yb"'6Y]
XYb`YhnhYb'Gd]Y`Yb`]b'Hc\_]c`YffY]W`hY`g]Y`XYb`ZØbZhYb'D`Uhn`i bX
ghfYVh`bi b`Ubž'X]YgY`@Y]ghi b[ `ni`ØVYfhfYZZYb"'6fi gg][ `Uh`Y]bY
GY\VY\]bXYfi b[`i bX`gYhnh'g]W`Xi fW`]\fYb'Gdcfh'b]W`h'bi f
dYfgØb`]W`ž'gcbXYfb`Ui W`gma Vc`]gW`ZØf`A YbgWXYb`a]h
6Y\]bXYfi b[Yb`Y]b"

< c ZZbi b[ghfÀ [Yf]b`XYf`@Y]W`hUh\`Yh]_`@]bXm
5j Y

8]Y`[ fØ» hY`A YXU]`Yb\cZZbi b[ `ZØf`XUg`HYUa`Ui g`A YW`YbVi f[!
J cfdca a Yfb`\_ØbbhY`YXcW`@]bXm'5j Y`Ui g`; fY]Zgk U`X`gY]b"'G]Y
ghUfhYh`b`]\fYf`DUfUXYX]gn]d`]b`ØVYf`(\$\$`A YhYfž`k`c`g]Y`U`g
H]hY`j YfhY]X][ Yf]b`Ubhf]hh"'6Y]'XYb`YhnhYb`DUfU`ma d]gWXYb'Gd]Y`Yb
]a`\_U\`f`&\$`%`]b'Hc\_]c`ghY`hY`g]Y`gc[ Uf`Y]bYb`K Y`hfY`\_cfX`Ui Z`
5VYf`Ui W`ØVYf`X]Y`%\$\$`A YhYf`k`]fX`g]Y`UbhfYhYbž`k`c`g]Y`]b'Hc_]c
VYfY]hg`6fcbnY`\c`hY"'A ]h`]\fYb`VYY]bXfi W`YbXYb`@Y]ghi b[ Yb`g]bX
X]Y`9fk Ufhi b[ Yb`Ub`g]Y`\cW`ž`i bX`XYf`GhUfhgW`i gg`ZØf`]\fY
K YhhVYk YfVY`ZÀ`h`Ua`GUa ghU[bUW`a]hhU["

A UfW`g`?`Ya dž`XYf`F cghc`W`Yf`Fi XYfYfž`k`]fX`X]Y`YfghYb
K Yhh`\_Aa dZY`ZØf`XUg`HYUa`j cb`A YW`YbVi f[ !J cfdca a Yfb`Ua
: fY]hU[`VYghfY]hYb"'9f`b]a a`h`VYfY]hg`ni a`Xf]hhYb`A U`Ub`XYb
DUfU`ma d]gWXYb'Gd]Y`Yb`hY]'i bX`hf]Zh`XU\Yf`Ui Z`Y]b`j YfhfUi hYgž
UVYf`Ui W`Ubgdfi W`gj c`Yg`I a ZY`X"'B UW`gY]bYa`UW`hYb'D`Uhn`i]b
Hc_]c`ghfYVh`XYf`5h\`Yh`]b`gY]bYa`Fi XYf!9]bYf`X]Yga U`Y]bY
D`Uhn]Yfi b[ `i bhYf`XYb`VYghYb`gYW`g`Ub"'?`Ya d`]gh`Y]b`6Y]gd]Y`
XUZØfž`k`]Y`n]Y`ghfYV][`Gdcfh`Yf`gY]b`_ØbbYbž`k`Ybb`g]Y`]\fY
9fZU\fi b[Yb`i bX`HfU]b]b[gfc`i`h]bY`]b`XYb`K Yhh`_Ua dZ`a]h
Y]bZ]Y» Yb`UggYb"

8Yf`dUfU`ma d]gWXY`; YXUb`_Y`[ Y\`h`k`Y]h`ØVYf`XYb`gdcfh`]W`Yb
K Yhh`\_Ua dZ\]bUi g`9g[Y\`hi a`_b`\_i`g]cb`i bX`X]Y`5bYf`_Ybbi b[
XYf`: À\][ \_Y]hYb`j cb`A YbgWXYb`a]h'6Y\]bXYfi b[Yb"'8]Y`Gd]Y`Y`]b
DUf]g`gc`Yb`XU\Yf`b]W`h`bi f`Y]bY`D`Uhhzc`fa`ZØf`dYfgØb`]W`Y
6Ygh`Y]ghi b[ Yb`gY]bž`gcbXYfb`Ui W`Y]b`NY]W`Yb`XYf`< cZZbi b[
gYhnYb"'5i W`k`Ybb`X]Y`5h\`YhYb`g]W`j cf`U`Ya`Ui Z`]\fY`N]Y`Y

_c b n Y b h f] Y f Y b ž] g h i Y X Y f j c b] \ b Y b Y] b 6 c h g W U Z h Y f Z Ø f A i h i b X
8 i f W \ U h Y j Y f a Ø [Y b "

9] b i b j Y f [Y g g] W X Y g 9 f Y V b] g

8] Y 5 h \ Y h Y b k Y f X Y b k Å \ f Y b X X Y f 9 f Ø Z b i b [g Z Y] Y f U i W X] Y
: U f V Y b 8 Y i h g W \ U b X g j Y f h f Y h Y b " F U a c b U 6 f i g g] [k] f X
[Y a Y] b g U a a] h H f] U h \ Y h A U f h] b G W i n X] Y X Y i h g W X Y : U \ b Y
h f U [Y b i b X X U a] h U i W X Y b G h c n U i Z X] Y X Y i h g W X Y
G d c f h [Y a Y] b g W U Z h i f Y d f Å g Y b h] Y f Y b " ð X Y f 5 h a c g d \ Å f Y X Y f
J c f Z Y i X Y i b X X Y f g h U f _ Y b ; Y a Y] b g W U Z h _ Ø b b Y b X] Y 5 h \ Y h Y b
g Y V g h V Y k i g g h] b X] Y K Y h h V Y k Y f V Y g h U f h Y b i b X] \ f Y H f Å i a Y U i Z
X Y a] b h Y f b U h] c b U Y b D U f _ Y h h j Y f Z c [Y b "

8] Y D U f U m a d] g W X Y b G d] Y Y g] b X b] W X h b i f Y] b Y J Y f U b g h U h i b [X Y g
G d c f h g ž g c b X Y f b U i W X Y] b Y : Y] Y f X Y f J] Y Z U h i b X X Y f
A Y b g W X] W X _ Y] h " G] Y n Y] [Y b ž k U g a Ø [W X] g h ž k Y b b A Y b g W X Y b] \ f Y
: Å \ [_ Y] h Y b j c U i g g W Ø d Z Y b i b X X] Y [Y g Y g W U Z h] W X Y b
6 U f f] Y f Y b Ø V Y f k] b X Y b ž X] Y c Z h i a K Y [g h Y \ Y b " K Å \ f Y b X X] Y
5 h \ Y h Y b U i g A Y W _ Y b V i f [! J c f d c a a Y f b j c] b X Y b : c _ i g
f Ø W _ Y b ž _ U b b a U b b i f [Y g d U b b h g Y] b ž k Y W X Y ; Y g W X] W X h Y b g] W X] b
X Y b _ c a a Y b X Y b H U [Y b Y b h Z U h Y b k Y f X Y b "

8] Y D U f U m a d] g W X Y b G d] Y Y] b D U f] g g] b X Y] b V Y X Y i h Y b X Y g
g d c f h] W X Y g 9 f Y] [b] g ž X U g b] W X h b i f j c b X Y b K Y h h Å a d Z Y b g Y V g h ž
g c b X Y f b U i W X j c b X Y b ; Y g W X] W X h Y b i b X <] b h Y f [f Ø b X Y b X Y f
5 h \ Y h Y b [Y d f Å [h] g h " 8] Y H Y] b Y \ a Y f j Y f h f Y h i b [U i g A Y W _ Y b V i f [!
J c f d c a a Y f b g h Y h Y] b X f i W _ g j c i b h Y f 6 Y k Y] g ž k] Y j] Y Z Å h] [X] Y
J c f U i g g Y h n i b [Y b i b X 9 f Z c [Y X Y f 5 h \ Y h Y b g] b X " D Y f g Ø b] W X Y
< Y f U i g Z c f X Y f i b [Y b ž k] Y X] Y G Y \ V Y \] b X Y f i b [j c b F U a c b U
6 f i g g] [ž g] b X n Y b h f U] b X Y b 6] c [f U Z] Y b X] Y g Y f G d c f h Y f ð b Y b i b X
f Y Z Y _ h] Y f Y b X] Y , V Y f k] b X i b [j c b 6 U f f] Y f Y b _ _ Ø f d Y f] W X Y k] Y
[Y g Y g W U Z h] W X Y "

8] Y D U f U m a d] g W X Y b G d] Y Y \ U V Y b g] W X] b X Y b Y h h Y b Å \ f Y b
n i b Y \ a Y b X d f c Z Y g g] c b U] g] Y f h i b X g] b X n i Y] b Y a [Y] W X k Y f h] [Y b
D Y b X U b h n i X Y b C m a d] g W X Y b G d] Y Y b [Y k c f X Y b " G d c f h] W X Y
@ Y] g h i b [Y b i b X d Y f g Ø b] W X Y 8 f U a Y b k Y f X Y b] b X Y f ; Y g Y g W U Z h

\Yi hY`VfY]hYf`UbYf_Ubb`i bX`[YgW\Ånhž`k Ug`g]W\`Ui W\`]b`XYf
6Yf]W\hYfghUhh`i b[ `k`XYfgd]Y[ `Y`h`8]Y`6YXYi hi b[ `X]YgYf`Gd]Y`Y`ZØf
X]Y`5`_nYdhUbnj`cb`A`YbgW\Yb`a`]h`6Y\`]bXYfi b[ Yb`]b`XYf
; YgY`gW\UZh`_Ubb`b]W\h`\cW\`[ Ybi`[`Y]b[ YgW\Ånh`k`YfXYb`"

8]Y`9b`hk`]W`_`i`b[`XYf`DUfU`ma`d]gW\Yb`Gd]Y`Y`

8]Y`YfghY`cZZ]n]Y`Y`DUfU`ma`d]gW\Y`Gd]Y`Y`ZU`bXYb`%-`*`\$`]b`F`ca
ghUhh`GY]hXYa` `U`h`g]W\`XUg`9j`Ybh`\_`cb]bi`]Yf`]W\`k`Y]hYfYb`hk`]W`Y`hž
gck`c`\`]b`6Yni`[ `Ui`ZX]Y`5bnU\`XYf`hY]`bY\`a`YbXYb`5h\`YhYb`U`g
Ui`W\`Ui`ZX]Y`J`]Y`ZU`h`XYf`GdcfhUfhYb`" `ϕ`XYb`5bZU`b[`g`U\`fYb`k`UfYb
X]Y`Gd]Y`Y`Y\`Yf`c`_`U`i`bX`j`cb`[`Yf]b[`Yf`K`U\`fbY\`a`i`b[`"<`Yi`hY
n]Y\`Yb`X]Y`DUfU`ma`d]W`g`b]W\`h`bi`f`]b`XYb`hY]`bY\`a`YbXYb`@`AbXYfb`ž
gcbXYfb`k`Y`hk`Y]h`Y]b`[`fc`»`Yg`Di`V`_`i`a` `Ub`"

9]b`K`YbXYdi`b`_`h`]b`XYf`; YgW\]W\hY`XYf`DUfU`ma`d]gW\Yb`Gd]Y`Y`
k`Uf`X]Y`9]bZØ\`fi`b[ `XYg`DUfU`ma`d]W`A`cj`Ya`Ybh`ž`XUg`XYb`:`c`\_`i`g
Ui`ZX]Y`@]gh`i`b[`i`bX`i`ϕ`hY[`fUh]cb`j`cb`GdcfhYfb`a`]h
6Y\`]bXYfi`b[Yb`Y`[`hY`"8]Yg`\U`h`X`Uni`V`Y][`YhfU[`Yb`ž`J`cfi`fhY]`Y
UVni`V`Ui`Yb`i`bX`XUg`6Yk`i`ggghY]b`ZØf`X]Y`:`Å\][`_`Y]hYb`j`cb
A`YbgW\Yb`a`]h`6Y\`]bXYfi`b[Yb`ni`gW\`ÅfZYb`"9]b`U`_`hi`Y`Yg`6Y]gd]Y`
ZØf`X]Y`ghY][`YbXY`Dc`di`Uf]h`Åh]gh`X]Y`9f\`Ø\`i`b[`XYf`HJ`!
9]bgW\U`hei`chYb`i`bX`X]Y`k`UW\gYbXY`5bnU\`XYf
A`YX]YbV`Yf]W\hYfghUhh`i`b[`ØV`Yf`X]Y`Gd]Y`Y`"

GhUh]gh]gW\Y`9]b`V`]W`_`Y`]b`X]Y`DUfU`ma`d]gW\Yb`Gd]Y`Y`

@Ji`h`XYa` `ϕ`hYfbU]cbU`Yb`DUfU`ma`d]gW\Yb`?`ca`]hY`Y`[`UV`Yg`V`Y]
XYb`Y`h`hYb`DUfU`ma`d]gW\Yb`Gd]Y`Yb`]b`Hc`\_`c`&`\$`&`%`]bg[`YgUa`h
(`(``\$` `5h\`YhYb`Ui`g`%`\*`&`B`Uh]cbYb`ž`X]Y`]b`&`&`GdcfhUfhYb`UbhfU`hYb`"
8]Y`5h\`YhYb`V`Yghf]hhYb`)'`-`9j`Ybhgž`k`Ug`Y]bYb`V`YXYi`hYbXYb
5bgh]Y[`]a` `J`Yf[`Y]W\`ni`XYb`j`cf\`Yf][`Yb`Gd]Y`Yb`XUfghY`h`"8]Yg
j`YfXYi`h]W\`h`XUg`ghY][`YbXY`ϕ`hYfYggY`i`bX`X]Y`6YhY][`i`b[`Ua
dUfU`ma`d]gW\Yb`Gdcfh`"

9]bY`I`a`ZfU[`Y`XYg`XYi`hgW\Yb`6Y\`]bXYfhYbgdcfhj`YfV`UbXg`Ui`g`

XYa`'ſ\f'&\$&'Yf[ UVžXUgg`Yhk U'+) 'i`'XYf'6YzfU[ hYb`XYf
A Y]bi b['k UfYbž`XUgg`X]Y`G]W hVUf\_Y]h'j`cb`DUfU!Gdcfh`Yfb`']b`XYb
A YX]Yb`ni [ Ybca`a`Yb`\Uh"9]b`YbhgW`Y]XYbXYf': U_hcf`XUZØf`]gh
X]Y`J YfVYggYfi b[ `XYf', VYfhfU[i b[gfYW`hY`i bX`!a`Ö[`]W`_Y]hYbž
X]Y`Yg`XYb`Ni`gW`Ui`Yfb`Yfa`Ö[`]W`Ybž`X]Y`K`Yh`_Aa`dZY`'j]`Y`ni
j`YfZc`[Yb"8Yf`5bgh]Y[ `XYf`DUfUX][ a`YbYž`X]Y`j`cb`Gdcfh`Yf]`bbYb
i`bX`A`YX]Ybj`YfhfYhYfb`[ `Y]W`Yfa`U»`Yb`[YZcfXYfh`k`YfXYbž`gdf]W`h
ZØf`X]Y`:`cfhgW`f]hhYž`X]Y`bcW`b`chk`YbX][ `g]bXž`UVYf`Ui`W`ZØf`X]Y
9fZc`[ Yž`X]Y`VYfY]hg`Yfn]Y`h`k`i`fXYb"

8]Y`DUfU`ma`d]gW`Yb`Gd]Y`Y`]b`DUf]g`k`YfXYb`a`]h`G]W`Yf`Y]h`Y]b`Yb
bYi`Yb`A`Y]`YbghY]b`]b`XYf';`YgW`]W`hY`XYg`dUfU`ma`d]gW`Yb`Gdcfhg
gYhYbž`]bXYa`'g]Y`gck`c`\`Yfj`c`ffU[YbXY`gdcfh]W`Y`@Y]ghi`b[Yb
nY][Yb`U`g`Ui`W`X]Y`;`YgW`]W`hYb`XYf`5h`YhYb`]b`XYb
J`cfXYf[ fi`bX`fØW`Ybž`X]Y`c`Zi`]bgd]f]YfYbX`i`bX`VYk`Y[YbX`g]bX"

8YhU]`g

6Ygi`W`Yb`G]Y`i`bg`Ui`Z.`b!U["XY