

H]Yf\Y]a 'B ØfbVYf[. 'GW bUi nYf!A]I 'GUa m gi W h'k Ufa Yg'Ni \Ui gY°

< i bX'GUa mžY]b'' !Å\ f][Yf'GW bUi nYf!A]I ž'gi W h'bUW
gY]bYf'F Yhi b['Ui g'gW \YW hYf'< U'hi b['Y]b'ZØfgcf['WYg
bYi Yg'Ni \Ui gY]b'B ØfbVYf["

⇒ 'B ØfbVYf[Yf'H]Yf\Y]a 'gh'XYf'gW bUi nYfUfh][Y'A]gW`b['GUa m
Ui ZY]b'bYi Yg'Ni \Ui gY'Ub[Yk]YgYb"'B UW XYa 'Yf'Ui g'Y]bYf
_UhUghfcd\U'Yb'< U'hi b['VYZfY]h'k i fXYž`YVh'XYf'XfY]Å\ f][Y'F ØXY
gY]h'XYa '&&"ž`]'&\$&('b'XYf'9]b]W h' b["'5i ZXYf'K YVg]hY'XYg
H]Yf\Y]a g'Z]bXYh'g]W 'Y]bY'\Yfn`]W Y'6YgW fY]Vi b['XYg
W Ufa UbhYb'J]YfVY]bYfgž'X]Y'gY]b'DchYbn]U'U'g'hfYi Yf'6Y['Y]hYf
i bhYfghfY]W h"

GUa mžY]b'a Åbb`]W Yf'GW bUi nYf!A]I ž]gh'_Y]b['Yk Ò\ b`]W Yf
< i bX"'Hfch'XYf'< YfUi gZcfXYfi b[Ybž'X]Y'gY]bY
; Ygi bX\Y]hg[YgW]W hY'a]h'g]W 'Vf]b[h' 'GUa m'Y]XYhi bhYf
9d]'Ydg]Y' 'gh'gY]b'K YgYb'VYY]bXfi W_YbX"'6Y]'i bg]'gh'Yf'UVYf
V]g\Yf'UbZU`gZfY] ž'VYhc bh'XUg'H]Yf\Y]a "'8]YgY'dcg]h]j Y'B UW f]W h
[]Vh'<cZbi b['Ui ZY]bY[Ygi bXY'i bX'ghUV]'Y'NY]h'ZØf'GUa m]a ' : U`
Y]bYf'5Xcdh]cb"

9]b'ZfYi bX`]W Yf'6Y['Y]hYf'a]h'VYgcbXYfYb 6YXØfZb]ggYb

6YgcbXYfg'\Yf] cfni \YVYb`]gh'GUa g'J Yf\U'hYb`]b'XYf'ϕhYfU_h]cb
a]h'A YbgW Yb"'8 Ug'H]Yf\Y]a 'VYgW fY]Vh]\b'U'g' YW h'Wc'Yb
Hmd ž'XYf'ZfYi bX`]W 'i bX'Ui Z[YgW`cggYb'Ui Z'gY]bY'DZY[Y_fÅZhY
fYU[]Yfh'Ni XYa 'Äi Zh'GUa m[i h'Ub'XYf'@Y]bYž'k Ug'Ui ZY]bY
[Yk]ggY'; fi bXUi gV]Xi b['i bX'gY]bY'6YfY]hgW UZhini a '@YfbYb
\]bk Y]gh"

8]Y`J`YfU`b`h`k`c`f`h`j`W`X`Y`b`]a` `H]Yf\`Y]a` `Ya` dZ\`Y`b` `Y`X`c`W`ž`X`U`g`g`?`]b`X`Y`f`
]a` `b`Y`i`Y`b` `N`i` \`U`i` g`Y` `V`Y`F`Y`]h`g` `À`h`Y`f` `g`Y`]b` `g`c` ``h`Y`b` ``8`]Y`g` ``]Y`[` h`X`U`f`U`b`ž`
X`U`g`g` `G`U`a` m`V`Y`] `X`Y`f` `6`Y`[` Y`[` b`i` b`[` `a` `]h`U`b`X`Y`f`Y`b` `<`i` b`X`Y`b` `Y`]b`Y`
[` Y`k`]g`g`Y` `G`m`a` d`U`h` \`Y` `n`Y`][` h`i` ` \`Y`f` ` _`U`b`b` `Y`g` `U` `g`c` `n`i`
i` b`h`Y`f`g`W`X`]Y`X` `]W`X`Y`b` `F`Y`U`_`h`]c`b`Y`b` ` _`c`a` a` Y`b` ``9`]b` ` \`U`f`a` c`b`]g`W`X`Y`g`
N`i` g`U`a` a` Y`b` `Y`V`Y`b` `Y`f`Z`c`f`X`Y`f`h`X`U`X`Y`f`Y`]b`Y` `g`c`f`[` Z`À`h`][` Y` `5`i` g`k` U` \` `X`Y`f`
b`Y`i`Y`b` `:` U`a` `]`Y`ž`i` a` `g`]W`X`Y`f`n`i` g`h`Y` ``Y`b`ž`X`U`g`g` `U` ``Y` `6`Y`h`Y`]`][` h`Y`b` `[` `Ø`W`_` `]W`X`
g`]b`X`"

K`]f` `g`i` W`X`Y`b` `Y`a` U`b`X`Y`b`ž`X`Y`f` `G`U`a` m`Y`]b` `N`i` \`U`i` g`Y` `Z`Ø`f`]a` a` Y`f`[`]V`h` ž`
\`Y`]`h`Y`g` `U`i` Z`X`Y`f` `K` Y`V`g`]h`Y` ``9`g` `g`Y`] `Y`b`h`g`W`X`Y`]X`Y`b`X`ž`X`U`g`g` `g`]W`X`
n`i` _`Ø`b`Z`h`][` Y` `<`U` `h`Y`f` `U`i` Z`X`]Y` `g`d`Y`n`]Y` ``Y`b` `6`Y`X`Ø`f`Z`b`]g`g`Y` `X`Y`g` `G`W`X`b`U`i` n`Y`f`!
A`]i` Y`g` `Y`]b`g`h`Y` ``Y`b` ` _`Ø`b`Y`b` ``8`c`W`X`Y`f` `5`i` Z`k` U`b`X` `k`]f`X` `X`i` f`W`X` `]Y` `h`f`Y`i` Y`
6`Y`[` `Y`]h`i` b`[` `Y`]b`Y`g` `j`]Y`f`V`Y`]b`][` Y`b` `:` f`Y`i` b`X`Y`g` `V`Y` `c` \`b`h`"

GUa`m`i`b`X` `g`Y`]b`Y` `h`]Y`f`]g`W`X`Y`b` `:` f`Y`i` b`X`Y` `]a` H]Yf\`Y]a`

8`U`g` `B`Ø`f`b`V`Y`f`[` Y`f` `H]Y`f` \`Y]a` ` \`U`h`i`b`Y`V`Y`b` `G`U`a` m`b`c`W`X` `j`]Y` `Y` `k` Y`]h`Y`f`Y`
H]Y`f`Y`ž`X`]Y` `U`i` Z`Y`]b` `b`Y`i` Y`g` `N`i` \`U`i` g`Y` `k` U`f`h`Y`b` ``8`U`n`i` ` [` Y` \`Ø`f`h` `U`i` W`X`
?` `U`i` g`ž`Y`]b` `6`f`U`W`_`Y`!`A`]i` ž`X`Y`f` `V`Y`f`Y`]h`g` `n`i` a` `X`f`]h`h`Y`b` `A` U` ``]b` `X`Y`f`
9`]b`f`]W`X`h`i` b`[` ` [` Y` `U`b`X`Y`h`]g`h` ``5`i` W`X` `@` W`_`m`i`g`i` W`X`h`X`f`]b`[` Y`b`X` `Y`]b`Y` `b`Y`i` Y`
:` U`a` `]`Y`ž`b`U`W`X`Y`a` `] \`f`Y` `6`Y`g`]h`n`Y`f`]b`[` Y`g`h`c`f`V`Y`b` `]g`h`i` b`X` `] \`f` `D`U`f`h`b`Y`f`
Ø`V`Y`f`Z`c`f`X`Y`f`h`k` U`f` ``8`]Y` `;` Y`g`W`X`]W`X`h`Y`b` `X`]Y`g`Y`f` `H]Y`f`Y` `j` Y`f`X`Y`i` h`]W`X`Y`b` `X`]Y`
B`c`h`k` Y`b`X`][` _`Y`]h`j` Y`f`U`b`h`k`c`f`h`i` b`[` g`j`c` ``Y`f` `H]Y`f` \`U` `h`i` b`[` `i` b`X` `5`X`c`d`h`]c`b`"

8`U`g` `H]Y`f` \`Y]a` ` \`U`h`i`U`i` W`X` `Y`]b`Y`b` `k` Y`]h`Y`f`Y`b` `A`]g`W`X` `]b`[` ž`?`Y`U`b`i` ž`X`Y`f`
i` b`h`Y`f` `g`W`X`k`]Y`f`][` Y`b` `6`Y`X`]b`[` i` b`[` Y`b` `U`i` Z`Y`]b`Y`f` `A` Ø` `X`Y`d`c`b`]Y`[` Y`Z`i` b`X`Y`b`
k`i` f`X`Y` ``8`]Y`g`Y` `G`W`X`]W`_`g`U` `Y` `a` U`W`X`Y`b` `X`Y`i` h`]W`X`ž`k`]Y` `k`]W`X`h`][` `Y`g` `]g`h`ž`
H]Y`f`Y`b` `]b` `B`c`h`n`i` ` \`Y` `Z`Y`b` `i` b`X` `] \`b`Y`b` `Y`]b`Y` `n`k` Y`]h`Y` `7` \`U`b`W`X` `n`i` ` [` Y`V`Y`b` ``
6`Y`g`c`b`X`Y`f`g` `G`U`a` m`ž` `a`]h`i`g`Y`]b`Y`a` `W`X`U`f`a` U`b`h`Y`b` `K` Y`g`Y`b`ž` `g`c` ``h`Y` `X`]Y`
A` Ø`[` `]W`X`_`Y`]h`Y`f` \`U` `h`Y`b`ž`]b` `Y`]b`Y`f` ``]Y`V`Y`j`c` ``Y`b` `:` U`a` `]`Y` `n`i` ``Y`V`Y`b`"

K` Y`f` `G`U`a` m`i`c`X`Y`f` `Y`]b`Y`g` `X`Y`f` `U`b`X`Y`f`Y`b` `H]Y`f`Y` `U`X`c`d`h`]Y`f`Y`b` `a` Ø`W`X`h`Y`ž`
`U`b`b` `g`]W`X` `X`]f`Y``h`i`a`]h`X`Y`a` `B`Ø`f`b`V`Y`f`[` Y`f` `H]Y`f` \`Y]a` `]b` `J`Y`f`V`]b`X`i` b`[`
g`Y`h`n`Y`b` ``9`g`]g`h`b`]W`X`h`i`b`i` f`Y`]b` `;` Y`k`]b`b` `Z`Ø`f` `X`]Y` `H]Y`f`Y`ž` `g`c`b`X`Y`f`b` `U`i` W`X`
Z`Ø`f` `X`]Y` `A` Y`b`g`W`X`Y`b`ž` `X`]Y` `a`]h`X`]Y`g`Y`b` `h`f`Y`i` Y`b` `6`Y`[` `Y`]h`Y`f`b` `] \`f` `@`Y`V`Y`b`
V`Y`f`Y`]W`X`Y`f`b` ` _`Ø`b`Y`b`"

9]b`5i Zfi Z`ni f`J YfUbhk cfhi b[

8]Y`G]hi Uh]cb`j cb`<i bX`GUa migd]Y[Y`h`b]W`h`bi f`X]Y
Bchk YbX][_Y]h`k]XYfz`Ui g`_UhUghfcd\U`Yb`l a gh`AbXYb`[YfYhhYhY
H]YfY`ni`i bhYfgh`0hnYbž`gcbXYfb`]gh`Ui W`X`Y]b`Y]bXf]b[`]W`X`Yf`5i Zfi Z
Ub`U`Y`H]Yf`]YV\UVYf" `>XYg`H]Yf`j YfX]Ybh`Y]bY`7\UbW`U`i ZY]b
[`0W`_]W`X`Yg`@YVYbž`i bX`k]f`U`Y`_0bbYb`XUni`VY]hfU[Ybž`]bXYa
k]f`i bg`Z0f`5Xcdh]cbYb`Ui g`XYa`H]Yf\Y]a`YbhgW`X]YXb" `Gc`k]fX
b]W`h`bi f`GUa mž`gcbXYfb`Ui W`X`j]Y`Yb`UbXYfYb`Y]XYbXYb`H]YfYb
[Y\c`ZYbž`XUg`Ni` \Ui gY`ni`Z]bXYbž`XUg`g]Y`j YfX]YbYb"

8 Ug`&hYfYggY`Ub`XYf`5Xcdh]cb`j cb`H]YfYbž`]bgVYgcbXYfY
<i bXYbž`\Uh]b`XYb`Y`h`h`Yb`>\fYb`ni [Ybca`a`Yb" `J]Y`Y`H]Yf\Y]a`Y
j YfnY]W`bYb`Y]bYb`5bgh]Y[`XYf`5bZfU[Yb`i bX`5Xcdh]cbYbž`k Ug
j Yfa`i`h]W`U`i ZY]b`k UW`gYbXYg`6Yk`i gghgY]b`Z0f`H]YfgW`i`hn`i`bX
H]YffYW`hY`ni`f0W`_ni`Z0\`fYb`]gh" `8]YgY`9bhk]W`_i`b[`_0bbhY`Ui`W`X
a]h`XYf`7cj]X!%- !DUbXYa]Y`ni`gUa`a`Yb`\`Ab[Ybž`k`A`fYbX`XYf
j]Y`Y`A`YbgW`Yb`a`Y`f`NY]h`ni`<Ui`gY`j`YfVfUW`hYb`i`bX`XYb
K`i`bgW`j`Yfgd0fhYbž`]`fY`@YVYbgg]hi`Uh]cb`Xi`fW`X`Y]b`<Ui`gh]Yf`ni
VYfY]W`X`Yfb"

8 Ug`B`0fbVYf[Yf`H]Yf\Y]a`gd]Y`h`Y]bY`k]W`X]h[Y`F`c`Y`Y]a`H]YfgW`i`hn
]b`XYf`F`Y[]cb`i`bX`gY`h`h`g]W`X`U`_h]`X`U`Z0f`Y]bž`XUg`6Yk`i`gghgY]b`Z0f
X]Y`5Xcdh]cb`j`cb`H]YfYb`ni`gh`A`f`_Yb" `G]Y`cf[Ub]g]YfYb`b]W`h`bi`f
5Xcdh]cbg]YfUbgh`U`hi`b[Ybž`gcbXYfb`UfVY]hYb`Ui`W`X`a]h`GW`X`i`Yb
i`bX`UbXYfYb`9]b]W`X`hi`b[Yb`ni`gUa`a`Ybž`i`a`> [YbX`]W`X`Y`0VYf
j`YfUbhk`cfhi`b[gVYk`i`gghYb`l`a [Ub[`a]h`H]YfYb`ni`]bZcfa]YfYb"
8]YgY`6`]Xi`b[gUfVY]h]gh`YbhgW`X]YXbXž`i`a`g]W`X`Yfni`ghY`Ybž`XUgg
ni`_0bZh[Y`H]YfVYg]h`Yf`X]Y`J`YfUbhk`cfhi`b[ž`X]Y`a]h`XYf`<U`hi`b[
Y]bYg`<Ui`gh]YfYg`Y]b`Yf[Y`hž`j`YfghY`Yb"

H]YfgW`i`hn[YgYhn`i`bX`5Xcdh]cb

&8Yi`hgW`U`bX`fY[Y`h`XUg`H]YfgW`i`hn[YgYhn`X]Y`F`Y`W`hY`i`bX
DZ]W`X`hYb`gck`c`\`j`cb`H]Yf\U`hYfb`U`g`Ui`W`X`j`cb`9]b]W`X`hi`b[Ybž`X]Y
H]YfY`j`Yfa`]hY`b" `H]Yf\Y]a`Y`g]bX`[YgYhn`]W`X`j`YfdZ]W`X`hYhž`j`cf`XYf
J`Yfa`]h`i`b[`g]W`X`Yfni`ghY`Ybž`XUgg`X]Y`ni`_0bZh[Yb`6Yg]h`Yf
[Y]Y][bY`h`g]bXž`X]Y`H]YfY`Ufh[YfYW`X`h`ni` \U`hYb" `8]Yg`VY]b`U`hYh

Ui W\`Y]bY` , VYfdfØZi b[`XYf`K c\bg]hi Uh]cbžXYf`Z]bUbn]Y``Yb`A]hhY`
i bX`XYf`9fZU\fi b[`]a `l a [Ub[`a]h]H]YfYb"

Ni gÅhn`]W\`VYcVUW\hYb`9I dYfhYbž`XUgg`nU\`fY]W\Y`6i bXYg`ÅbXYf
gdYn]Y``Y`Dfc[fUa a Y`ni f` : ÒfXYfi b[`j cb`H]YfUXcdh]cbYb`]bg
@YVYb`[Yfi ZYb`\UVYbž`i a `X]Y`5bnU\`XYf`]b`H]Yf\Y]a Yb`YVYbXYb
H]YfY`ni `j Yff]b[Yfb`" ð`6UmYfb`VY]gd]Y`gk Y]gY`[]Vh`Yg`ð]h]Uh]j Ybž
X]Y`g]W\`XUfUi Z`_cbnYbhf]YfYbž`X]Y`5Xcdh]cb`j cb`H]YfYb`Ui g
H]Yf\Y]a Yb`UhhfU_h]j Yf`ni `a UW\Ybž`]bXYa `g]Y`VY]gd]Y`gk Y]gY`X]Y
5Xcdh]cbg[YVØ\Yb`fYXi n]YfYb`cXYf`5i Z`_Åfi b[gUfVY]h`Y]ghYb"

GhUh]gh]_Yb`ni f`H]YfUXcdh]cb

B UW\`Y]bYa `6Yf]W\h`XYg`8Yi hgW\Yb`H]YfgW\i hnVi bXYg`\UVYb
&\$&` `Yhk U`) \$i `XYf`VYZfU[hYb`H]Yf\Y]a Y`Y]bYb`5bgh]Y[`XYf
5Xcdh]cbYb`]a `j Yf[`Y]W\`ni `XYb`J cf`U\Yb`ZYgh[YghY`h`F i bX
+ "\$\$\$\$`<i bXY`i bX`? UhmYb`k i fXYb`]a `YhnhYb`ð\`f`Ui g`XYi hgW\Yb
H]Yf\Y]a Yb`j Yfa]hhY`h`8]YgY`NU\`Yb`nY][Ybž`XUgg`XUg`ðhYfYggY
Ub`H]YfgW\i hn`i bX`5Xcdh]cb`k Y]hYf\]b`ghY][hi bX`j]Y`Y`A YbgW\Yb
VYfY]h`g]bXž`XUg`J YfUbhk cfhi b[gVYk i gghgY]b`ZØf`Y]b`<Ui gh]Yf`ni
ØVYfbY\`a Yb"

GUa m`]gh`bi f`Y]bYf`j cb`j]Y`Yb`<i bXYbž`X]Y`]a `j Yfnk Y]ZY`hYb
K UfhYb`Ui Z`Y]b`bYi Yg`Ni \Ui gY`g]bX`"H]Yf\Y]a Y`gW\`U[Yb`5`Ufa
i bX`V]hhYb`X]Y`² ZZYb`h]W\`_Y]hi a `A]h\`ZY`VY]`XYf`J Yfa]hhi b[`j cb
H]YfYbž`i a `]\bYb`Y]b`VYggYfYg`@YVYb`ni `Yfa Ò[`]W\Yb`"K Y]hYfY
ðZcfa Uh]cbYb`ØVYf`X]Y`5Xcdh]cb`j cb`H]YfYb`Z]bXYb`g]W\`Ui ZXYf
<ca YdU[Y`XYg`8Yi hgW\Yb`H]YfgW\i hnVi bXYg"

8YhU]`g

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