

8 Yf`X][]hU`Y`9i fc.`7\ UbWb`i bX`F]g]_Yb
Z0f`i bgYf` :]bUbngmghYa °

9fZU\fyb`G]Y`U`Yg`0VYf`XYb`X][]hU`Yb`9i fc.`gY]bY`J cfhY]`Yž
< YfUi gZcfXYfi b[Ybž`hYWbc`c []gWY` ; fi bX`U[Yb`i bX
5i gk]f_i b[Yb`Ui ZXUg` :]bUbngmghYa "



⊕`Y]bYf`K Y`hž`X]Y`ni bY`a YbX`j cb`X][]hU`Yb`⊕bcj Uh]cbYb
[YdfÄ[h]ghž`ghY`h`9i fcdU`j cf`Y]bYf`dchYbn]Y`Yb`FYj c`i h]cb`]a
:]bUbngY`hcf.`XYa`X][]hU`Yb`9i fc`"8]YgY`j cb`XYf`9i fcdÄ]gWYb
NYbhU`VUb`_f9N6Ł`j cf[YgW`U[YbY`X][]hU`Y`K Ä`fi b[`ÖbbhY`X]Y
5fh`i bX`K Y]gYž`k]Y`k]f` ; Y`X`bi hmYbž`[fi bX`Y[YbX`j YfÄbXYfb`"G]Y
j Yfgdf]W`hž`XYb`NU`i b[gj Yf`_Y`f`YZZ]n]YbhYfž`g]W`YfYf`i bX
]b`_i gj] Yf`ni` [YghU`hYbž`k Ä`fYbX`g]Y`[`Y]W`nY]h][`U`g`5b`hk cfh`Ui Z
XYb`5i Zgh]Y[`df]j UhYf`?fmdhck Ä`fi b[Yb`i bX`[`cVU`Yf`X][]hU`Yf
NU`i b[ggmghYa Y`[YgY`Yb`k]fX`"8cW`Ä]bhYf`XYb`[`ÄbnYbXYb
DYfgdY`_hj] Yb`Ui Yfb`Ui W`<YfUi gZcfXYfi b[Yb`i`j cb
8UhYb`gW`i hmZfU[Yb`V]g`Ä]b`ni`a Ö[`]W`Yb`F]g]_Yb`Z0f`XUg
hfUX]h]cbY`Y`6Ub`_YbgmghYa`"8]YgYf`5fh]_Y`k]fZh`Y]bYb`6`]W`_Ui Z
X]Y`j]Y`gW`]W`h][Yb`5gdY`_hY`XYg`X][]hU`Yb`9i fcgž`VY`Yi W`hY`higY]bY

7\UbWb'i bX'Ghc`dYfghY]bY'i bX'nY][hž'k Y`WXY`5i gk]f_i b[Yb`Yf
Ui ZX]Y`Yi fcdÀ]gWXY`K]fhgWUZh'i bX'; YgY`gWUZh`\UVYb`_ÒbbhY"

9]bZ0\ fi b[`]b`XYb`X][]hU`Yb`9i fc



GhY`X]f`Y]bY`Ni _i bZhij cfž]b`XYf`XY]b`; Y`X`b]W`h`a`Y`f`bi`f`]b`XYf`
6f]YZhUgWXY`cXYf`Ui ZX]Ya`?cbhc`YI]gh]Yfhž`gcbXYfb`U`g`X][]hU`Y
9]b\Y]h`X]fY`_hj`cb`XYf`NYbhfU`VUb`_`VYfY]h[YghY`h`k]fX`
k]`_ca`a`Yb`]b`XYf`K`Y`h`XYg`X][]hU`Yb`9i`fcg`"8]YgYg
Ua`V]h]cb]YfhY`Dfc`Y`_hž`XUg`]a``&\$&%]cb`XYf`9i`fcdÀ]gWXYb
NYbhfU`VUb`_`f9N6Ł`]bg`@YVYb`[Yfi`ZYb`k`i`fXYž`n]Y`h`XUfUi`ZUVž`Y]b
Y`Y`_hfc]gWXYg`NU\`i`b[ga`]hY`ni`gWUZZYbž`XUg`XYb`d`mg]gWXYb
9i`fc`Yf[`Àbnh`i`bX`XYb`NU\`i`b[gj`Yf`_Y`f`]b`XYf`9i`fcncbY
fY]c`i`h]cb]Yfh`5i`g[Y[YVYb`j`cb`XYb`NYbhfU`VUb`_Yb`XYg
9i`fcfUi`a`gžgc`Yg`b]W`h`bi`f`gWXYb`Y`Y`i`bX`g]WXYfY`HfUbgU`_h]cbYb
Yfa`Ò[`]WXYbž`gcbXYfb`Ui`W`X]Y`a`cbYh`ÀFY`Gci`j`Yf`Àb]h`Àh`9i`fcdUg
]b`Y]bYf`ni`bY`a`Yb`X`X][]hU`]g]YfhYb`K`Y`h`gh`Àf`_Yb`"9]b`XYhU]`Y]fhYf
,`VYfV`]W`_`ØVYf`XUg`?`cbnYdh]Z]bXYh]g]WXYb`Ui`ZX]Yf`K`_]`dYX]U!GY]hY
ni`a`X][]hU`Yb`9i`fcžX]Y`X]Y`; fi`bX`U[Yb`i`bX`9bhk]W`i`b[Yb
XYg`Dfc`Y`_hg`i`a`ZUggYbX`XUfghY`h"

8]Y`J]g]cb`\\]bhYf`X]YgYf`X][]hU`Yb`K`Å\fi b[`]ghj]Y`gW\]W\h]["
9]bYfgY]hg`gc``g]Y`g]W\YfghY``Ybž`XUgg`NYbhfU`VUb_[Y`X`k`Y]hYf\]b
Y]bY`nYbhfU`Y`F`c``Y`U`g`ghUV]`Y`a`c`bYhÅfY`6Ug]g`gd]Y`hž`[YfUXY`]b
NY]hYbž`]b`XYbYb`df]j UhY`?fmdhck`Å\fi b[Yb`i`bX`HYW\!;][UbhYb
a`]h`Y][YbYb`NU\`i`b[ggmghYa`Yb`Ub`9]bZi`gg[Yk`]bbYb`"
5bXYfYfgY]hg`k`]fX`Ub[YghfYVhž`U``Yb`6Øf[Yf]bbYb`i`bX`6Øf[Yfb
Y]bYb`_cgYb`cgYb`Ni [Ub[`ni`Y]bYa`g]W\YfYbž`[YgYhn`]W\Yb
NU\`i`b[ga`]hhY``ni`V]YhYbž`XUg`J`YfhfUi`Yb`]b`X][]hU`Y
HfUbgU`_h]cbYb`ZØfXYfh";`Y]W\`nY]h][`_ØbbhY`XYf`X][]hU`Y`9i`fc`X]Y
Z]bUbn]Y``Y`GHUV]`]hÅh`XYf`9i`fcncbY`gW\ØhnYb`i`bX`]bbcj`Uh]j`Y
NU\`i`b[ga`Ø[`]W\`_Y]hYb`YfØZbYbž`X]Y`VY]gd]Y`gk`Y]gY`X]Y
J`YfhY`]i`b[`]j`cb`J`Yfa`Ø[Yb`c`XYf`gcn]U`Yf`<`]ZY`j`YfY]bZUW\Yb`"

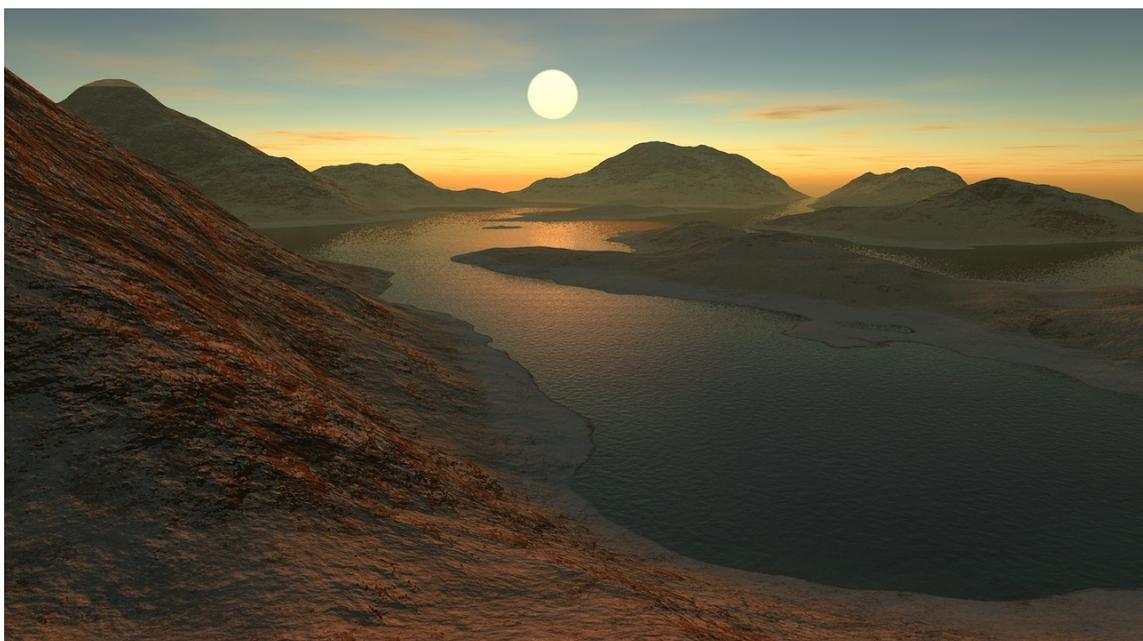
8]Y`9bhk`]W`_i`b[`XYg`Dfc`Y`_hg`gW\`fY]hYh`_cbh]bi`]Yf`]W\`j`cfUb`"
6YfY]hg`gY]h`&\$&\$`k`YfXYb`]b`Ni`gUa`a`YbUfVY]h`a`]h`XYf
9i`fcdÅ]gW\Yb`_b]j`Ygh]h]cbgVUb`_`f9-6Ł`DfchchmdYb`[YhYghYhž`i`bX`]a
GYdhYa`VYf`&\$&&`_ØbX][hY`X]Y`9N6`Y]bY`?`ccdYfUh]cb`a`]h`ZØbZ
l`bhYfbY\`a`Yb`Ubž`i`a`6Ybi`hnYfcVYfZÅW\Yb`ni`Ybhk`]W`_Y`b``9]b
_X\`f`gdÅhYfž`]a`A`U`]`&\$&`ž`VYghÅh][hYb`9f[YVb]ggY`Y]bYf
A`Uf`_hUbU`mgY`i`bX`Y]bYg`Dfchchmd]b[!Dfc`Y`_hg`X]Y`hYW\`b]gW\`Y
A`UW\`VUf`_Y]h``9]bYb`Yb`hgW\`Y]XYbXYb`GW\`f]hh`a`Uf`_Yfhy`XYf`%,`"
C`_hcVYf`&\$&`ž`U`g`X]Y`9N6`XYb`9]bhf]hh]b`X]Y`J`cfVYfY]hi`b[gd`UgY
VYgW\`cggž`i`a`FY[Y`k`Yf`_Y`ni`Z]bU`]g]YfYb`i`bX`5bV]YhYf
Ui`gni`k`Å`Yb``6]g`9bXY`&\$&)`d`Ubh`X]Y`9N6ž`ØVYf`X]Y`b`ÅW\`ghYb
GW\`f]hhY`ni`Yb`hgW\`Y]XYbž`k`Å`fYbX`Y]bY`a`Ø[`]W\`Y`9]bZØ\fi`b[
nk`]gW\`Yb`&\$&)`i`bX`&\$&`*`Ubj`]g]Yfh`k`]fX``DUfU``Y``XUni`_`Uh`X]Y
9i`fcdÅ]gW\`Y`?`ca`a`]gg]cb`Y]bYb`;`YgYhnYgYbhk`i`fZ]`cf[Y`Y[hž`XYf
X]Y`9]bZØ\fi`b[`fY[Y`b`gc````Y`hnh`]W\``]Y[h`X]Y`9b`hgW\`Y]Xi`b[
Y`XcW\`VY]`XYb`9i`!A`]h[`]Y`XghUUhYb`i`bX`XYa`9i`fcdÅ]gW\`Yb
DUf`Ua`Ybh`"

9i`dYfhYba`Y]bi`b[Ybž`k`]Y`g]Y`Ui`Z`XYf`965XUm`&\$&)`X]g`_i`h]Yfh
k`i`fXYbž`i`bhYfghfY]W\Yb`XUg`hfUbgZcfa`Uh]j`Y`DchYbn]U`X]YgYf
_b]h]Uh]j`Y``@Ui`h`6Yf]W\`hYb`j`cb`:`]b`Y`I`hfU`VYhcbhYb`J`YfhfYhYf`Ui`g
6Ub`_Yb`i`bX`6YfUhi`b[gi`bhYfbY\`a`Yb`k`]Y`B`]g`6Y]Yf`j`cb
5W\`bhi`fY`X]Y`6YXYi`hi`b[`XYg`X][]hU`Yb`9i`fcg`ZØf`X][]hU`Y
J`Yfa`Ø[Yb`gk`YfhYž`]bhYfbUh]cbU`Y`NU\`i`b[Yb`i`bX`XYb
Yi`fcdÅ]gW\Yb`9]bnY`\UbXY``8Ub]Y`A`W@YUb`j`cb`XYf`9N6

g_]nn]YfhY`XUVY]`nk Y]`D\UgYb`XYg`Dfc`Y`hg.`ni bÅW gh`X]Y
I bhYfgi W i b[`j cb`Nk YW`i bX`5bk YbXi b[gZÅ``Ybž[YZc`[hj cb
XYf`J cfVYfY]hi b[`XYf`hYW bc`c[]gWYb`bZfUghfi _hi f``GdfYWYf
k]Y`J]``Y`Gc]bhi `j cb`BcfXYU`6Ub`_k]YgYb`ni XYa`XUfUi Z`]bž`XUgg
_i bXYbcf]Ybh]YfhY`@Øgi b[Yb`ZØf`6Ub`_Yb`YbhgWY]XYbX`gY]b
k YfXYbžk Å\fybX`5bXfYU`A Y]Yf`j cb`XYf`8N`6Ub`_X]Y`6YXØfZb]ggY
j cb`i bhYfbY\ a Ybg_i bXYb`]b`XYb`J cfXYf[fi bX`fØW`hY"

8cW`b]W hibi f`7\UbW`b`dfÅ[Yb`X]Y`8]g_i gg]cb``6YXYb`_Yb
\]bg]W h]W`Y]bYf`j YfghÅf`_hYb`NYbhfU`]g]Yfi b[`i bX`a Ø[`]WYf
9]bgW`fÅb`_i b[Yb`XYf`Df]j Uhg d\ÅfY`k YfXYb`Ui hž`YVYbgc`k]Y
K Ufbi b[Yb`j cf`F]g]_Yb`k]Y`Z]bUbn]Y``Yf`NYbgi f`cXYf
G]WYf\Y]hg`ØW`_Yb`Xi fW`7mVYfUb[f]ZY``8]Y`i bUV`Åb[][_Y]h`XYf
NYbhfU`VUb`_i bX`X]Y`GHUV`]hÅh`XYg`hfUX]h]cbY``Yb`6Ub`_YbgmghYa`g
_ØbbhYb`YVYbZU``g`Ui ZXYa`Gd]Y``ghY`Ybž`k Ybb`X]Y`9]bZØ\fi b[
b]W h`gc f[ZÅ`h][`]YghU`hY`h`k]fX``8]YgY`_f]h]gWYb`Di b`_hY`k YfZYb
: fU[Yb`Ui Zž`X]Y`k Y]h`ØVYf`hYW`b]gWY`A UW`VUf`_Y]h`\]bUi g[Y\Yb
i bX`h]YZ]b`X]Y`[YgY``gW`UZh]WYb`i bX`dc`]h]gWYb`Ghfi _hi fYb
9i fcdUg`Y]b[fY]ZYb"

<]bhYf[fi bX`i bX`9bhk]W`_i b[



F Y]gYb`k]f`ni fØW`]b`X]Y`5bZÅb[Y`XYg`X][]hU`Yb`NY]hU`hYfgž`U`g`X]Y
≠YY`j`cb` ; Y`X`c`bY`d`mg]gW`Y` : cfa` Yfg`ha` U`g`X]Y` : UbhUg]Y`j`cb
HYW`bc`c`[Yb`i`bX`J`]g]cbÅfYb`VYZØ[Y`hY`"@Ub[Y`VYj`cf`XYf`X][]hU`Y
9i`fc`ØVYf`U`i`dh`]b`XYb`? ØdZYb`XYf`9i`fcdÅ]gW`Yb`NYbhfU`VUb`
fØN6Ł ; YghU`h`UbbU`a`ž`Y[hY`X]Y`9]bZØ`fi`b[]j`cb`6]hW`]b`]a``ſ`U`f
&\$\$`-`XYb` ; fi`bXghY]b`ZØf`Y]bY`bYi`Y`ŸfU`XYf` :]bUbnk`Y`h`5`g`YfghY
XYnYbhfU`]g]YfhY`? fmdhc`k`Å`fi`b[ž`VUg]YfYbX`Ui`Z`XYf`6`c`W`W`U]b!
HYW`bc`c`[]Yž`fY`c`i`h]cb]YfhY`6]hW`]b`X]Y`J`cfghY`i`b[]j`cb
K`Å`fi`b[Ybž`X]Y`c`bY`nYbhfU`Y`5i`hcf]hÅh`Z`b`_h]cb]YfYb`"8`]YgY
j`YfhY`]hY`8`UhYbVUb`_ž`X]Y`HfUbgU`_h]cbYb`Xi`fW`ghUf`_Y
J`YfgW`ØggY`i`b[]g]W`Yfhž`k`i`fXY`ni`a`Gmbcbma`ZØf`≠bcbj`Uh]cb`
i`bX`GdY`_i`Uh]cb`"9]b`h]YZf[Y`YbXYf`9]bV`]W`_]b`X]Y`K`Y`h`XYf`
? fmdhc`k`Å`fi`b[Yb`Z]bXYh`g]W`Ui`Z`XYf`K`]_]dYX]U!GY]hY`ni
**? fmdhc`k`Å`fi`b[Ybž`X]Y`]`fY`9b`hk`]W`_i`b[]i`bX` : i`b`_h]cbgk`Y]gY`
XYhU]`Yfh`VYgW`fY]Vh`"**

≈a` ; YZc`[Y`j`cb`6]hW`]b`Yb`hghUbXYb`HUi`gYbXY`k`Y]hYfYf`X][]hU`Yf
K`Å`fi`b[Ybž`gc[YbUbbhY`5`hW`]bgž`XUfi`bhYf`9h`Yfž`XUg`U`g
]bhYfbYg`NU`i`b[ga`]hY`XYg`9h`YfYi`a`!BYh`nk`Yf`_g`X]Y
nk`Y]h[fØ»`hY`A`Uf`_h`Ud]hU`]g]Yfi`b[YffY]W`hY`"5bZUb[]&\$(`n`Å`hY
a`Ub`ØVYf`&\$\$`\$`\$`\$`j`YfgW`]YXYbY`? fmdhc`k`Å`fi`b[Ybž`XYfYb
 ; YgUa`hk`Yfh`VY]Yhk`U`%ž`6`]]cbYb`9i`fc`U[]Y]b`FØW`[Ub[
[Y[YbØVYf`XYa`<`ØW`ghghUbX`j`cb`ZUgh`6`]]cbYb`9i`fc`]a``ſ`U`f
&\$\$`%"8`cW`hfc`hn`]`fYf`J`YfVfY]hi`b[ž`]bgVYgc`bXYfY`]b
9b`hk`]W`_i`b[gl`i`bX`GW`k`Y`Yb`ÅbXYfbž`V`]YVYb`g]Y`[fØ»`hYb`hY]`g
GdY`_i`Uh]cbgcV`Y`hY`"Bi`f`k`Yb][Y`GhUUhYbž`k`]Y`9`GU`j`UXcf`a`]h
XYf`9]bZØ`fi`b[]j`cb`6]hW`]b`U`g`c`Zn]Y`Y`K`Å`fi`b[ž`Yf`_UbbhYb`g]Y
U`g`[YgYhn`]W`Yg`NU`i`b[ga`]hY`Ub`"8]Y`c`Y`J`c`Uh`]hÅhž
G]W`Yf`Y`]hgf]g]_Yb`Xi`fW`Gc`Zhk`UfYZ`Y`f`i`bX`X]Y`5bZÅ`][]_Y]h`ZØf
6Yhfi`[]c`XYf` ; Y`Xk`ÅgW`Y`a`UW`hYb`g]Y`ZØf`j`]Y`Y`F`Y[]Yfi`b[Yb`ni
Y]bYa`nk`Y]Z`UZhYb`9i`dYf]a`Yb`h`"

K`Å`fYbX`df]j`UhY`? fmdhc`k`Å`fi`b[Yb`X]Y` :]bUbnk`Y`h`Ui`Za`]gW`hYbž
VY[UbbYb`NYbhfU`VUb`_Yb`k`Y`hk`Y]hž`ØVYf`Y][YbY`X][]hU`Y
@Øgi`b[Yb`bUW`ni`XYb`_Yb`"8Yf`6Y[f]ZZ`7YbhfU`6Ub`_8][]hU`
7i`ffYbW`mif7`687Ł`k`i`fXY`[YdfÅ[hž`i`a`X][]hU`Y`K`Å`fi`b[Yb`ni
VYgW`fY]VYbž`X]Y`X]fY`_h]j`cb`ghUUh`]W`Yb`≠gh]hi`h]cbYb`Ui`g[Y[YVYb
k`YfXYb`]a` ; Y[YbgUhn`ni`XYnYbhfU`Yb`A`cXY`Yb`k`]Y`6]hW`]b`"

GhUUhYb`VYj cfni [hYb`XUVY]`a`Y]gh`Y`Y`_hfc`b]gW`Yg` ;` Y`X`ž`X`Ug`Ub
VYghY`Y`b`XY` :`]b`Ub`ng`mg`h`Ya` Y`Ub` [` Y`Vi` b`XY`b`]gh`ž`gh`U`h`i`f`Y`]b`Y
C`b`]b`Y`k` Å`fi` b` [` Y`b`c`b`Y`n`Y`b`h`f`U`Y`?`c`b`h`f`c` ``Y`" `8`]Y`g`Y`9`b`h`k`]W`_`i` b`
gd`]Y` [` Y`h`Y`X`Y`b`K` i` b`g`W`k`]X`Y`f`ž`X`]Y`J`c`f`h`Y`]Y`X`Y`f`8`][`]h`U`]g`]Y`fi` b` [` ni
bi` h`n`Y`b`ž`c`b`Y`X`]Y`G`h`U`V`]`]h`Å`h`i` b`X`?`c`b`h`f`c` ``Y`Ø`V`Y`f`X`]Y` ;` Y`X`d`c`]h`_`
Ui` Z`ni` [` Y`V`Y`b`" :` Ø`f`9`i` f`c`d`U`k` i` f`X`Y`X`]Y`g`Y`f`5`b`g`U`h`n`i` a
5`i` g` [` Ub` [` g`d`i` b`_`h`Z`Ø`f`Y`]b`Y`][` Y`b`Y`g`D`f`c`Y`_`h`ž`X`U`g`X`]Y`6`U`Ub`W`
nk`]g`W`Y`b` `b`c`j` U`h`]c`b`i` b`X`G`]W`Y`f`Y`]h`Z`]b`X`Y`b`i`g`c` ``h`Y`"

8`]Y`≠`X`Y`Y`]b`Y`g`X`][`]h`U`Y`b`9`i` f`c`g`b`U`a` `Y`f`g`h`a` U`g`_`c`b`_`f`Y`h`Y` :` c`f`a` `Ub`ž
U`g`X`]Y`9`N`6`]a` `?`c`b`h`Y`i` h`[` `c`V`U`Y`f`h`Y`W`b`c`c`[`]g`W`Y`f`i` a` k` Å`ni` b` [` Y`b
i` b`X`X`Y`g`5`i` Z`gh`]Y` [` g`d`f`]j` U`h`Y`f`?`f`m`d`h`c`k` Å`fi` b` [` Y`b`f`Y`U` [`]Y`f`h`Y`" `G`W`c`b
j`c`f`&`\$`&`\$`V`Y` [` U`b`b`Y`b`8`]g`_`i` g`g`]c`b`Y`b`Ø`V`Y`f`X`]Y`B`c`h`k` Y`b`X`][` _`Y`]h`ž`X`U`g
h`f`U`X`]h`]c`b`Y` ``Y`N`Y`b`h`f`U`V`U`b`_` [` Y`X`U`b`X`]Y`X`][`]h`U`Y`Y`f`U`U`b`n`i` d`U`g`g`Y`b`"
8`Y`f`Y`b`h`g`W`Y`]X`Y`b`X`Y`A`c`a` Y`b`h`_`U`a` `]a` `ž` `]`&`\$`&`%`ž`U`g`X`]Y`9`N`6
c`Z`]n`]Y` ``X`U`g`D`f`c`Y`_`h`g`h`U`f`h`Y`h`Y`ž`i` a` `Y`]b`Y`Y`_`h`f`c`b`]g`W`Y`g
N`U`_`i` b` [` ga`]h`h`Y` `ni` `Y`b`h`k`]W`_`Y`b`ž`X`U`g`X`Y`b`d`m`g`]g`W`Y`b`9`i` f`c`Y`f` [` Å`b`n`h`
5`b`X`Y`f`g`U`g`6`]h`W`c`]b`c`X`Y`f`9`h`Y`f`g`c` ``h`Y`X`]Y`g`Y`K` Å`fi` b` [` n`Y`b`h`f`U`
 [` Y`gh`Y`i` Y`f`h`k` Y`f`X`Y`b`ž`i` a` `G`h`U`V`]`]h`Å`h`i`n`i` [` Y`k` Å`f`Y`]g`h`Y`b`i` b`X`X`]Y`
a`c`b`Y`h`Å`f`Y`G`c`i` j` Y`f`Å`b`]h`Å`h`X`Y`f`9`i` f`c`n`c`b`Y`n`i` `g`W`Ø`h`n`Y`b`" `6`Y`f`Y`]h`g`&`\$`&`\$`
k` i` f`X`Y`b`Y`f`g`h`Y`D`f`c`h`c`h`m`d`Y`b`]b`Ni` g`U`a` a` Y`b`U`f`V`Y`]h`a`]h`X`Y`f`
9`i` f`c`d`Å`]g`W`Y`b` `b`j` Y`gh`]h`]c`b`g`V`U`b`_` [` Y`h`Y`g`h`Y`h`ž`Y`]b`N`Y`]W`Y`b`X`U`Z`Ø`f`ž`X`U`g`g`
9`i` f`c`d`U`X`Y`b`5`b`g`W`i` g`g`U`b`X`]Y`X`][`]h`U`Y`H`f`U`b`g`Z`c`f`a` U`h`]c`b`b`]W`h`
j` Y`f`d`U`g`g`Y`b`k`c` ``h`Y`"

8`]Y`9`b`h`g`h`Y`i` b` [` X`Y`g`X`][`]h`U`Y`b`9`i` f`c`g`i`Å`g`g`h`g`]W`k`g`c`a`]h`U`g`F`Y`U`_`h`]c`b`
Ui` Z`Y`]b`Y`X`c`d`d`Y`h`Y`<`Y`f`U`i` g`Z`c`f`X`Y`fi` b` [` j` Y`f`g`h`Y`Y`b`9`]b`Y`f`g`Y`]h`g`
X`f`Å`b` [` h`Y`b`d`f`]j` U`h`Y`X`][`]h`U`Y`K` Å`fi` b` [` Y`b`]b`X`Y`b`A`U`f`_`h`i` b`X`Z`c`f`X`Y`f`h`Y`b`
X`U`g`h`f`U`X`]h`]c`b`Y` ``Y` :`]b`Ub`ng`mg`h`Ya` `Y`f`U`i` g`ž`U`b`X`Y`f`Y`f`g`Y`]h`g`k` i` W`k`X`Y`f`
8`fi` W`_`ž`X`Y`b`6`Ø`f` [` Y`f`]b`b`Y`b`i` b`X`6`Ø`f` [` Y`f`b`a`c`X`Y`f`b`Y`ž`g`]W`Y`f`Y`
N`U`_`i` b` [` ga` Y`h`c`X`Y`b`U`b`n`i`V`]Y`h`Y`b`"K` Å`f`Y`b`X`?`f`m`d`h`c`k` Å`fi` b` [` Y`b`c`Z`h`
a`]h`F`]g`_`Y`b`k`]Y`?`i` f`g`g`W`k` U`b`_`i` b` [` Y`b`c`X`Y`f`a` U`b` [` Y`b`X`Y`f`
F`Y` [` i`]Y`fi` b` [` j` Y`f`Vi` b`X`Y`b`g`]b`X`ž`k`]Y`Ui` W`k`Ui` Z` :` **]b`Ub`nh`]d`**
`Y`f`j`c`f` [` Y`c`V`Y`b`k`]f`X`ž`j` Y`f`Z`c` [` h`X`]Y`9`N`6`Y`]b`Y`b`U`b`X`Y`f`Y`b`K`Y` [` " `8`Y`f`
X`][`]h`U`Y`9`i` f`c`g`c` ``b`]W`h`b`i` f`h`Y`W`b`]g`W`Y` `b`c`j` U`h`]c`b`Y`b`i` h`n`Y`b`ž`
g`c`b`X`Y`f`b`Ui` W`k`J`Y`f`h`f`U`i` Y`b`g`W`U`Z`Y`b`ž`]b`X`Y`a` `Y`f`g`h`U`h`]W`k`U`V` [` Y`g`]W`Y`f`h`
]g`h`K`]Y`g`]W`k`X`]Y`g`Y`J`]g`]c`b`]b`X`Y`f`D`f`U`i`]g`i` a` g`Y`h`n`Y`b`i`Å`g`g`h`i` b`X`
k`Y`W`Y`<`Ø`f`X`Y`b`X`U`V`Y`]n`i`Ø`V`Y`f`k`]b`X`Y`b`g`]b`X`ž`V`Y`]V`h`Y`]b`Y`X`Y`f`

nYbhfU`Yb : fU[Yb`]b`XYf`k Y]hYfYb`9btk]W`i b["

HYWk bc`c []gWk Y` ; fi bX`U[Yb



HUi Wk Yb`k]f`Y]b`]b`XUg`hYWk b]gWk Y` < YfngħW`ž`XUg`XYb`X][]hU`Yb
9i fc`ni a` @VYb`Yfk YW`Yb`_ÖbbhY` `Y]bY`K Y`h`Ui g`7cXYgž
J YfgWk`ØggY`i b[Yb`i bX`X][]hU`Yb` ðYbh]h`h`Ybž`X]Y`k Y]h`ØVYf`XUg
`]bUi g[Y`hž`k Ug`k]f`i bg`i bhYf` ; Y`X`V]g`Yf`j cf[YghY`h`UVYb`" ð
NYbhfi a` X]YgYf` ðbcj Uh]cb`ghY`Yb`HYWk bc`c []Yb`k]Y`X]Y
6`c`W`W`U]bž`X]Y`VYfY]hg`df]j UhY`? fmdhck Å`fi b[Yb`k]Y`6]hWk]b
dfÅ[Ybž`gck]Y`?cbnYdhY`XYf`X][]hU`Yb` ðYbh]h`hž`X]Y`g]Wk YfY`i bX
bU`h`cgY`HfUbgU`h]cbYb`Yfa Ö[`]Wk Yb`gc`Yb`"K Å`fYbX`X]Y
9i fcdÅ]gWk Y`NYbhfU`VUub`_f9N6E`bcWk`_Y]bY`YbX[Ø`h][Y
9bhgWk Y]Xi b[`ØVYf`X]Y`[YbUi Y`hYWk b]gWk Y`I a` gYmi b[` [YhfcZZYb
`Uhž`V]YhYb`X]YgY`6Ui ghY]bY`Y]bY` ; fi bX`U[Yž`i a` X]Y
: i b`_h]cbgk Y]gY`Y]bYg`X][]hU`Yb`9i fcg`ni`j YfghY`Yb`i bX`gY]bY
DchYbn]U`Y` `gck]Y`F]g`_Yb` `ni`Yf[fØbXYb`"

6Y []bbYb`k]f`a]h`XYf`6`c`W`W`U]bž`Y]bYf`HYWk bc`c []Yž`X]Y`c`Zh`U`g

X][]hU`Yg`<Ui dhVi Wk`VYgWk f]YVYb`k]fX" G]Y`nY]Wk bYh
HfUbgU_h]cbYb`b`Y]bYf`XYnYbhfU`g]YfhYbž`a Ub]di`Uh]cbgg]Wk YfYb
8UhYbVUb`_Ui Zž`X]Y`Xi fWk`_fmdhc [fUZ]gWk Y`J YfZU`fYb`[YgWk Ømh
]gh`i`a` ; Y[YbgUhn`ni`df]j UhYb`?fmdhc k`Å\fi b[Ybž`VY]`XYbYb`X]Y
6`c`W`Wk U]b`a`Y]gh`ÖZZYb`h]Wk`i`bX`XYnYbhfU`VYhf]YVYb`k]fXž`_Öbb`hY
XYf`X][]hU`Y`9i fc`Y]bY`nYbhfU`g]YfhY`cXYf`mVf]XY`J Uf]UbhY
bi`hnYbž`i`a`?cbhfc`Y`i`bX`GhUV]`h`Åh`ni`[Yk`Å`f`Y]ghYb`"Gc`Wk Y
GmghYa`Y`YfZcfXYfb`Ui`Wk`g]Wk YfY`X][]hU`Y`K`U`Y`hgž`b`XYbYb
Bi`hnYf`]\fY`K`Å\fi b[`gdY]Wk Yfb`"9]b`6Y]gd]Y`ZØf`X]Y
: i b_h]cbgk Y]gY`gc`Wk Yf`K`U`Y`hg`V]YhYh`X]Y`6`c`W`Wk U]b`"Wk a
K`U`Y`h!5ddž`X]Y`Xi fWk`D`B!Gk`i`h`i`bX`6UW`i`d!D`fUgYb`XYb
Ni [f]ZZ`Ui`Z`X][]hU`Y`J`Yfa`Ö[Ybgk`YfhY`UVg]Wk Yfhž`gY`Vgh`k`Ybb`Y]b
; Yf`Åh`j`Yf`cfYb`[Y`h`"

9]b`k`Y]hYfYf`nYbhfU`Yf`DZY]`Yf`]gh`X]Y`X][]hU`Y`≠Yb`h]h`Åhž`X]Y
g]Wk YfghY`hž`XUgg`HfUbgU_h]cbYb`b]Wk`h`bi`f`hY`Wk`b]gWk`ž`gcb`XYfb
Ui`Wk`fY`Wk`h]Wk`Y]b`XYi`h][`ni`[YcfXb`Yh`k`YfXYb`_Öbb`Yb`"8UVY]
\Ub`XY`h`Yg`g]Wk`i`a`Y]b`X][]hU`Y`g`Dfc`Z]ž`XUg`dYfg`Öb`]Wk`Y`8UhYb`k`JY
BUa`Yž; YVi`fhgXUhi`a`cXYf`V]ca`Yhf]gWk`Y`A`Yf`_a`U`Y`i`a`ZUggh`i`bX
gck`c`\`cb`]bY`U`g`Ui`Wk`c`ZZ]bY`ni`f`≠Yb`h]Z]_Uh]cb`X]Yb`h`"b`XYf`9I
k`]fX`gY]h`&\$&\$`Ub`Y]bYf`Y]b`Y]h]Wk`Yb`X][]hU`Yb`≠Yb`h]h`Åh
[YUfVY]hYhž`X]Y`Åb`XYf`ØVYf[fY]ZYb`XY`5i`h`Yb`h]Z]n]Yfi`b[`Yf`Y]Wk`hYfb
gc`""Gc`Wk`Y`GmghYa`Y`_Öbb`hYb`Yg`Yfa`Ö[`]Wk`Ybž`XYb`X][]hU`Yb`9i`fc
]b`Y]bYf`5dd`Y]bYf`5fh`X][]hU`Yf`6f]Y`ZhUgWk`Y`ni`gdY]Wk`Yfb`i`bX
[`Y]Wk`nY]h][`Ua`h]Wk`Y`b`Zcfa`Uh]cbYb`cXYf`F`Y`Wk`hY`b`UWk`ni`k`Y]gYb`"
9]b`gUhn`VYfY]Wk`Y`fY]Wk`Yb`j`cb`6Y`ØfXYb[`Åb[Yb`ØVYf
:]b`Ub`nhfUbgU_h]cbYb`V]g`\]b`ni` ; Ygi`bX`Y]hgb`UWk`k`Y]gYbž`k`JY`Ui`Z
XYf`GY]hY`XYg` : cfi`a`J`Yf`U[g`XYhU]`Y]Yfh`VYgWk`f]YVYb`k`]fX"

8]Y`J`YfV]b`Xi`b[`j`cb`6`c`W`Wk U]b`i`bX`X][]hU`Yf`≠Yb`h]h`Åh`_Öbb`hY
XYb`X][]hU`Yb`9i`fc`ni`Y]b`Ya``Åi`»Yfgh`g]Wk`YfYb`i`bX`Y`ZZ]n]Yb`hYb
NU`\`i`b[ga`]hY`a`UWk`Yb`"HfUbgU_h]cbYb`_Öbb`hYb`]b`9Wk`hnY]h
UV[Yk`]W`Y`h`k`YfXYbž`k`Å`fYb`X`X]Y`nYbhfU`Y`GhYi`Yfi`b[`Xi`fWk`X]Y
9N6`g]Wk`YfghY`hž`XUgg`_Y]bY`i`b`cbhfc`Y]YfhYb`GWk`Ub`_i`b[Yb`k`JY
VY]`6]h`Wk`]b`Ui`ZhYf`hYb`"; `Y]Wk`nY]h][`Yf`Ui`Vh`X]Y`X][]hU`Y`≠Yb`h]h`Åh
Y]bY`df`Ån]gY`Ni`cfXbi`b[`j`cb`NU`\`i`b[Ybž`k`Ug`6Y`hfi [`cXYf
; Y`Xk`ÅgWk`Y`YfgWk`k`YfYb`k`ØfXY`"8c`Wk`[Yb`Ui`]\Yf]b`]Y[h`Ui`Wk
Y]bY`<Yf`Ui`gZcfXYfi`b[`8]Y`GdY]Wk`Yfi`b[`gYbg]V`Yf`8UhYb`]b

X][]hU`Yb`GmghYa Yb`V]f[h`F]g]_Yb`k]Y`≠XYbh]hÅhgX]YVghU\`cXYf
A Ub]di `Uh]cbž]bgvYgcbXYfY`k Ybb`hYW`b]gW`Y`GW`i hna U» bU`a Yb
b]W`h`Ui`gfY]W`Yb`"8]Y`9I`d`Ub`h`XU`Yfž`ghfYb[Y
8UhYbgW`i hmf]W`h]b]Yb`i bX`GhUbXUfXg`k]Y`X]Y`Ga Ufh!Y`8!
; YgYhn[YVi b[`ni`]a`d`Ya Ybh]YfYbž`i a`gc`W`Y` ; YZU`fYb`ni
a]b]a]YfYb"

9]b`k Y]hYfYf`5gdY`hž`XYf`VY]`XYf`hYW`b]gW`Yb`I`a`gYhni b[
VYfØW`_g]W`h][h`k YfXYb`a`i`ggž]gh`X]Y`6Ybi hnYfZfYi bX`]W`_Y]h"
8][]hU`Y`K`U`Yhgž`X]Y`XYb`Ni [Ub[`ni`a`X][]hU`Yb`9i`fc
Yfa`Ò[`]W`Ybž`a`ØgghYb`]bhi`]hj`i[YghU`hYh`gY]b`i`bX`[`Y]W`nY]h][
`ØW`ghY`G]W`Yf`Y]hgghUbXUfXg`V]YhYb`i`Yhk`U`Xi`fW`j`YfgW`ØggY`hY
6UW`_i`dg`cXYf`a`Y`fghi`Z][Y`5i`h`Ybh]Z]n]Yfi b[gdfcnYggY`"Ni`XYa
ghY`h`g]W`X]Y` : fU[Yž`cV`i`bX`k`]Y`C`ZZ]bY!HfUb`gU`_h]cbYb
i`bhYfghØh`h`k`YfXYb`_ØbbYbž`i`a`Ui`W`i]b`F`Y[]cbYb`a`]h`gW`Y`W`hYf
≠hYfbYhj`YfV]bXi b[`cXYf`VY]`hYW`b]gW`Yb`5i`gZ`Yb`NU`i`b[Yb`ni
[Yk`Å`f`Y]ghYb`"8]Y`Dfc`hc`hmdYbž`X]Y`gY]h`&\$\$` [YhYghYh`k`YfXYbž
gc`Yb`[YbUi`X]YgY`6U`Ub`W`nk`]gW`Yb`≠bcj`Uh]cbž`G]W`Yf`Y]h`i`bX
Ni [`Ab[`]W`_Y]h`Z]bXYbž`XcW`X]Y`YbX[Ø]h][Y`hYW`b]gW`Y
5fW`]hY`_hi`f`V`Y]Vh`bcW`c`ZYb"

J`c`fhY]`Y`XYg`X][]hU`Yb`9i`fc



K Ug'k ĀfYž'k Ybb'Y]b'Y]bZUWYf'?'W_ [YbØ[hYž'i a 'NU\`i b[Yb']b
GY_i bXYbVfi W\hY]`Yb'UVni k]W_Y`bž'c\`bY`\`c\`Y'; YVØ\`fYb'cXYf
_ca d`n]YfhY`DfcnYggY3'; YbUi ` \]Yf'gYhnh'XUg'J YfgdFYWYb'XYg
X][]hU'Yb'9i fcg'Ubž'XYf'U`g'9f[Ābni b[`ni a `d\mg]gWYb'; Y`X
nU\`fY]WY`J cfhY]`Y'a]h'g]W\`Vf]b[Yb' _ØbbhY" `J cb' [YghY][YfhYf
9ZZ]n]Ybn'ØVYf'Yf\`Ø\`hY`G]WYf\`Y]h'V]g`\`]b'ni `Y]bYf'`bYi Yb
8]a Ybg]cb`XYf'6Ybi hnYfZfYi bX`]W\`_Y]h' `X]Y`dchYbn]Y`Yb
D'i gdi b_hY`X]YgYf'X][]hU'Yb'K Ā\`fi b[ž'k]Y'g]Y'j cb`XYf
9i fcdĀ]gWYb'NYbhfU`VUb`_f9N6Ē`Yb'k]W_Y`h'k]fXž'g]bX'j]Y`ZĀ`h]["
G]Y`_ØbbhYb`b]W\`h'bi f`XYb'5`hU[`XYf'6Øf[Yf]bbYb'i bX'6Øf[Yf
Yf`Y]W\`hYfbž'gcbXYfb`Ui W\`X]Y`k]fhgW\`UZh]W\`Y'i bX'dc`h]gWY
GhY`i b[`9i fcdUg'ghĀf`_Yb"

9]b`nYbhfU`Yf'; Yk]bb`Y[]h']b`XYf'9ZZ]n]Ybnž'X]Y`XYf'X][]hU'Y`9i fc`]b
XYb'NU\`i b[gj Yf`_Y\`f`Vf]b[Yb' _ØbbhY" `HfUbgU_h]cbYb']b'9W\`hnY]hž
c\`bY`X]Y`J YfnØ[Yfi b[Ybž'X]Y`VY]`hfUX]h]cbY`Yb
6Ub`_ØVYfk Y]gi b[Yb'cZiUi ZhfYhYbž'g]bX'Y]b'?Yfbn]Y" `< ĀbX`Yf'i bX
J YfVfUi W\`Yf`_ØbbhYb'j cb`XYi h]W\` [Yf]b[YfYb
HfUbgU_h]cbg_cghYb`dfcZ]h]YfYbž'XU`Nk]gWYb`\ĀbX`Yf'k]Y
NU\`i b[gX]YbghY]ghYf'hY]`k Y]gY`i a [Ub[Yb'k YfXYb" `6YgcbXYfg
ZØf`I bhYfbY\`a Yb' _ØbbhY`X]Yg`Y]bYb'K YhVYk YfVgj cfhY]`
VYXYi hYbž'XU`X]Y`9N6`j cfgW\`Ā[hž'Bi hni b[g[YVØ\`fYb'ni `XYW_Y`bž
X]Y`6Ub`_Yb`< ĀbX`Yfb`VYfYW\`bYb" `Ni XYa `k ØfXY`Y]b'Y]b\`Y]h]W\`Yg

X][]hU`Yg`NU\`i b[ga]hhY`X]Y`<ØfXYb`nk]gWXYb`9I !@AbXYfb
UVVUi Ybž`k c`XYfnY]h`i bhYfgW]YX`]WXY`GmghYa Y`c`bY
[fYbnØVYfgW fY]hYbXY` : i b_h]cbU`h`h`h`VYghY`Yb`"Gc`WXY`5gdY`_hY
k YfXYb`Ui W`Ui Z:]bUbnh]d` \Yfj cf[Y`cVYbž`k c`X]Y
I bUV`Ab[][_Y]h`j cb`[`cVU`Yb`5bV]YhYfb`k]Y`J]gU`cXYf
A UghYfWUfX`U`g`ghfUHY[]gWXYf`J cfhY`V`VYhcb`h`k]fX"

B YVYb`XYf` ; YgW`k]bX][_Y]h`i bX`?cghYbYZ[n]Ybn`ghY`h`X]Y
G]WXYf`Y`h`ja` : c_i g`XYf`[Yd`UbhYb`9]bZØ`fi b[" `a` ; Y[YbgUhn`ni
df]j UhYb`?fmdhck`Å`fi b[Ybž`X]Y`c`ZiXi fW`J`c`Uh`]h`h`i bX
6Yhfi [gf]g]_Yb`[Yd`U[h`g]bXž`gc`XYf`X][]hU`Y`9i fc`U`g
NYbhfU`VUb_[Y`X`f7`6`8`7`k`ghUUh`]W`UV[Yg]WXYfh`gY]b`"8`Ug
VYXYi hYh`b]W`h`bi f`GhUV`]h`h`ja` `K Yfhž`gcbXYfb`Ui W`GW`i`hn`j`cf
5i gZ`Ybž`k]Y`g]Y`VY]`df]j`Uhk`]fhgW`UZh`]WXYb`GhUV`YWc]bg
j`cf`_ca`a`Yb`_ØbbYb`"8]Y`9N6`dfØZh`ni`XYa
8UhYbgW`i`hna`U`b`U`a`Ybž`i`a` `6Yhfi [g!`i`bX`7`mVYfUb[f]Zgf]g]_Yb
ni`a`]b]a`]YfYbž`k`Å`fYbX`X]Y`nYbhfU`Y`?c`b`h`f`c`Y`g]WXYfghY`h`ž`XUgg
HfUbgU`_h]cbYb`b`UW`j`c`n]Y`V`Uf`i`b`X`a`Ub]di`Uh]cbgg]WXYf`g]bX`"9]b
k`Y]hYfYf`D`i`gdi`b`_h`8]Y`A`Ø[`]W`_Y]hž`XYb`X][]hU`Yb`9i`fc`Ui`W
c`b`Y`h`hYfb`Y`h`Y`fV]bXi`b[`ni`bi`hnYbž`_ØbbhY`]b`_f]h]gWXYb
G]hi`Uh]cbYb`c`XYf`UV[Y`Y[YbYb`F`Y[]cbYb`j`cb`i`bgW`Å`hnV`UfYa
K`Yfh`gY]b"

6Ybi`hnYfZfYi`bX`]W`_Y]h`V`]XYh`Y]bYb`k`Y]hYfYb`9W`_dZY`]Yf`XYf
dchYbn]Y`Yb`J`cfhY`]Y`"8`Yf`Ni [Ub[`ni`Y]bYa`X][]hU`Yb
NU\`i`b[ga]hhY`ž`XUg`X]fY`_h]`cb`XYf`NYbhfU`VUb`_`Ui`g[Y[YVYb
k]fXž`_ØbbhY`A`YbgWXYb`c`b`Y`hfUX]h]cbY`Y`6`Ub`__cbhYb` `Yhk`U`]b
`AbX`]WXYb`c`XYf`k`]fhgW`UZh`]W`VYbUW`hY][]hYb` ; YV]YhYb` `]b`XUg
:]bUbngmghYa` `]bhY[f]YfYb`"8]YgY`Z]bUb]Y`Y`h`_i`g]cb`k`]fX`U`g
Y]bYg`XYf`<`Ui`dhn]Y`Y`Ub[YgY`Ybž`XU`g]Y`VfY]hYfY
6Yj`Ø`_Yfi`b[ggW`]W`hYb`YffY]W`hi`bX`gc`n]U`Y`i`b[`Y]W`Y`hYb
UVVUi`Yb`_ØbbhY`" ; `Y]W`nY]h][`gc`X]Y`6YX]Ybi`b[`]bhi`]h]`gY]bž
Yhk`U`Xi`fW`5`ddg`c`XYf`X][]hU`Y`K`U`Y`hgž`X]Y`XYb`5`hU[`Yf`Y]W`hYfb`
8]Y`A`Ø[`]W`_Y]hž`6YhfÅ[Y`nk`]gWXYb`)`\$\$`i`bX`" "\$\$\$`9i`fc`ni` `U`hYbž
k]Y`XYfnY]h`X]g`_i`h]Yfhž`k`ØfXY`ni`XYa`Y]bY`dfU`_h]_UV`Y`@Øgi`b[`ZØf
U`hÅ[`]WXY`5i`g[UVYb`V]YhYbž`c`b`Y`6Uf[Y`X`j`c`gh`AbX][`ni
YfgYhnYb"

5i Z'dc`h]gWXYf'i bX'k]fhgWUZh]WXYf'9VYbY'`ÒbbhY`XYf'X][]hU`Y
9i fc`X]Y`Dcg]h]cb`9i fcdUg`ja`' [`cVU`Yb`A Uf`_h'gh`Àf`_Yb`" `ϕXYa` `X]Y
5V\`Àb[] [_Y]h]j`cb`! G!Ua`Yf`_Ub]gWXYb`NU\`i`b [gX]Ybgh`Y]ghYfb`k`]Y
A UghYfWUfX`cXYf`DUmdU`fYXi`n]Yfh`k`]fXž` [Yk`]bbh`X]Y`9i` `Ub
l`bUV\`Àb[] [_Y]h`i` `Y]b`5gdY`_hž`XYf`VYgcbXYfg`VY]`]bhYfbUh]cbU`Yb
GUb`_h]cbYb`cXYf` [Ycdc`h]gWXYb`GdUbbi`b [Yb`fY`Yj`Ubh`k`]fX`"
6Y]gd]Y`Y`k`]Y`X]Y`6`cW`_UXY`j`cb`GdYbXYb`Ub`K`]_]YU`_g`Xi`fW
 [fc»Y`5bV]YhYf`ja` `ϕ\`f`&`\$`%`\$`nY][Ybž`k`]Y`k`]W`h][`Y]bY`Y][YbY
ϕZfUghfi`_hi`f`gY]b`_Ubb`"8UfØVYf`\`]bUi`g`ZØfXYfh`XYf'X][]hU`Y`9i`fc
XYb`K`YhhVYk`YfV`nk`]gWXYb`NU\`i`b [ga`]hhY`UbV]YhYfbž`k`Ug
dchYbn]Y``ni`b]YXf][YfYb`DfY]gYb`i`bX`hYW`b]gWXYb`ϕbcj`Uh]cbYb
ZØ\`fhž`k`]Y`Ui`W`Ui`Z`Hcc`_`h`8][]hU`]g]Yfi`b [`Yf`Ài`hYfh`k`]fX`"

9]b`6`]W`_Ui`ZUbXYfY`@ÀbXYf`k`]Y`7\]bU`a`]h`XYa` `X][]hU`Yb`M`Ub
cXYf`GW`k`YXYb`a`]h`XYf` [Yd`UbhYb`9!`?`fcbU`j`YfXYi`h`]W`hž`XUgg
9i`fcdU`a`]h`XYa` `X][]hU`Yb`9i`fc`ja`' [`cVU`Yb`K`YhhVYk`YfV
VYghY`Yb`a`i`ggž`i`a`k`]fhgWUZh]WXYb`b]W`h`ni`fØW`_ni`ZU`Yb`"8]Y
Gh`Àf`_i`b [`XYg`j`YfhfUi`Ybg`]b`X][]hU`Y`NU\`i`b [ga`Yh`cXYb`i`bX`XYf
X]fY`_hY`Ni` [Ub [`ni`NYbhfU`VUb`__cbhYb`ZØf`6Øf [Yf`i`bX
l`bhYfbY`a`Yb`_ÒbbhYb`Ub [Zf]gh][`XUg`:]bUbngmghYa`fcVi`ghYf
a`UWXYb`"8cW`hfc`hn`X]YgYf`j`]Y`j`YfgdfYWXYbXYb`DYfgdY`_h]j`Yb
V`Y]VYb`:`fU [Yb`cZZYbž`]bgVYgcbXYfY`\`]bg]W`h`]W`XYf`dfU`_h]gWXYb
l`a`gYhni`b [`i`bX`XYf` [YgY`gWUZh]WXYb`5`_nYdhUbn`"

B UW`hY]`Y`XYg`X][]hU`Yb`9i`fc



<]bhYf`XYf`[`ÀbnYbXYb` : UggUXY`XYg`X][]hU`Yb`9i fcg`Ui Yfh`Y]bY
 GWXUhYbgY]hYž`X]Y`b]W\hØVYfgY\Yb`k YfXYb`XUfZ` `Y]b` ; YZYW\h
 Ui g`hYW\ b]gW\Ybž` [YgY`gW\UZh]W\Yb`i bX`k]fhgW\UZh]W\Yb` < ØfXYbž
 X]Y`XYb`K Y[`ni f`9]bZØ\fi b[`X]YgYf`K À\fi b[`YfgW\k YfYb
 ØbbhYb``K À\fybX`X]Y`9i fcdÀ]gW\Y`NYbhFU`VUb``fØN6È`a]h
 < cW\Xfi W`Ub`XYf`I a gYhni b[`UfVY]hYhž`k YfZYb`?f]h`_Yf`i bX
 9i dYfhYb` [`Y]W\Yfa U»Yb` : fU[Yb`Ui Z`X]Y`j cb`8UhYbgW\i h`ØVYf
 Z]bUbniY`Y`GhUV]`hÀh`V]g` \]b`ni f` [YgY`gW\UZh]W\Yb`5_nYdhUbn
 fY]W\Yb``8]YgY`F]g]_Yb`i bX`<YfUi gZcfXYfi b[Yb`_ØbbhYb
 YbhgW\Y]XYbX`XUfØVYf`VYgh]a a Ybž`cV`XYf`X][]hU`Y`9i fc
 hUhgÀW`]W`XUg`hfUbgZcfa Uh]j Y`DchYbn]U`YbhzU`hYhž`XUg` \]a
 ni [YgW\ f]YVYb`k]fX``

9]b`nYbhFU`Yg`5b`]Y[Yb`XfY`h`g]W\`i a`XYb`GW\i h`XYf
 Df]j Uhgd`ÀfY``5bXYfg`U`g`6Uf[Y`Xž`XUg`Ubc bma Y`HfUbgU`h]cbYb
 Yfa Ø[`]W\hž`_ØbbhYb`X][]hU`Y`NU\`i b[Yb` `gY`Vgh`VY]`VYghYf
 5Vg]W\h` `X][]hU`Y`Gdi fYb` \]bhYf`UggYb``8]Y`Gcf[Y`j cf
 , VYfk UW\i b[`Xi fW\`X]Y`NYbhFU`VUb`_`cXYf`FY[]Yfi b[Yb`]gh`b]W\h
 i bVY[fØbXYhž`XU`HfUbgU`h]cbYb`dchYbn]Y``bUW\j YfZc` [VUf`g]bX``
 8]Y``bhYfbUh]cbU`Y`5fVY]hg[fi ddY`ZØf`8UhYbgW\i h`]b`XYf
 HYW\bc`c` []Y`fK ; 8DHž`Ui W`VY`_Ubbh`U`g`6Yf`]b` ; fci dž`k Ufbh`]b
 Y]bYa` `5fVY]hgdUd]Yf`j cf`F]g]_Yb`k]Y`DfcZ]`b[`i bX
 8UhYbg]W\Yf`Y]hg`ØW`_Yb``K]Y`Ui Z`bYhnd`c`]h]_`cf[`VYf]W\hYhž`

ZcfXYfh'X]Y'; fi ddYž'8 UhYbgWłi hn'VYfY]hg]b'XYf'D'Ubi b[gd\UgY'ni
j YfUb_YfbžYhk U'Xi fWł'DgYi Xcbma]g]Yfi b['cXYf'a]b]a]YfhY
8 UhYbYfZUggi b['VY]'DYfY!hc!DYfY!'i bX'C ZZ]bY!NU\`i b[Yb"

9b['a]h'XYb'8 UhYbgWłi hnVYXYb_Yb'j Yf_bØdZh]gh'XUg'F]g]_c'j cb
7mVYfUb[f]ZZYb'i bX'8 UhYba]ggVfUi Wł"8]Y'GdY]WłYfi b['gYbg]V'Yf
:]bUbnXUhYb'j]b'X][]hU`Yb'GmghYa Yb'a UWłh'XYb'X][]hU`Yb'9i fc'ni
Y]bYa 'dchYbn]Y`Yb'N]Y`ZØf'< UW_Yf"9]b'YfZc`[fY]WłYf'5b[f]ZZ
_ØbbhY'b]Włh'bi f'j]bX]j]Xi Y`Y'Bi hnYf'gWłÅX][Ybž'gcbXYfb'Ui Wł
XUg'J YfhfUi Yb'j]b'X]Y'[YgUa hY'žZfUghfi _hi f'i bhYf[fUVYb"Nk Uf
dfØZh'X]Y'9N6'A U» bU\ a Yb'ni f'A]b]a]Yfi b['gc`WłYf'; YZU\ fYbž
XcWł'X]Y'?ca d`Yi]hÅh'X][]hU`Yf'GmghYa Y`Åggh'Nk Y]ZY`Ub`Y]bYf
\i bXYfhdfcnYbh][Yb'G]WłYf\Y]h'VYghY\Yb"<]bni '_ca a hž'XUgg
FY[]Yfi b[Yb'cXYf':]bUbn]bgh]hi hY'Ni [Ub['ni
dYfgcbYbVYnc[YbYb'8 UhYb`Yf\U`hYb'_ØbbhYbž'k Ug'X]Y'HØf'ZØf
A]ggVfUi Wł'cXYf'Z]bUbn]Y`Y'NYbgi f'ØZZbYh"

5i Zk]fhgWłUZh]WłYf'9VYbY'Xfc\h'X]Y'9]bZØ\fi b['XYg'X][]hU`Yb
9i fcg'XUg'hfUX]h]cbY`Y'6Ub_YbgmghYa 'ni 'XYghUV]'g]YfYb"K Ybb
6Øf[Yf'i bX'ł bhYfbY\ a Yb'X]fY_h'Ni [Ub['ni 'NYbhfU`VUb__cbhYb
Yf\U`hYbž'_ØbbhYb'9]b'U[Yb'j cb'; YgWłÅZh'gVUb_Yb'UVZ]Y» Yb'`Y]b
GnYbUf]cž'XUg'X]Y'9N6'Xi fWł'C VYf[fYbnYb'ZØf'9]b'U[Yb'ni
j Yf\]bXYfb'gi Włh"8 Yb'bcWł'V`Y]Vh'X]Y'; YZU\ fž'XUgg'6Ub_Yb'j]b
]\fYf'F c`Y'U'g'?fYX]h[YVYf' [YgWłk ÅWłh'k YfXYbž'k Ug`Ub[Zf]gh][
X]Y'?fYX]h] Yf[UVY'i bX'XUa]h'X]Y'K]fhgWłUZh'VYY]bhfÅWłh][Yb
_ØbbhY"8]YgY'6YXYb_Yb'k YfXYb'Ui Wł'Ui Z'**Hcc`_]h**

**8][]hU`]g]Yfi b['h\Ya Uh]g]Yfhž'k c'Ui ZX]Y'dchYbn]Y`Yb
žghUV]'hÅhYb'ja 'i:]bUbn]gY_hc'f'\]b[Yk]YgYb'k]fX"**

9]bY'k Y]hYfY'<ØfXY`]Y[h'j]b'XYf'[YgY`gWłUZh]WłYb'i bX
hYWłb]gWłYb'Ni [Åb['Wł_Y]h"K Å\ fYbX'XYf'X][]hU`Y'9i fc'XUfUi Z
UVn]Y'hž'Z]bUbn]Y`Y'ž_i]g]cb'ni 'ZØfXYfbž'_ØbbhYb'A YbgWłYb'a]h
[Yf]b[Yb'hYWłb]gWłYb'?Yb'bh]ggYb'cXYf'c\ bY'žhYfbYhni [Ub[
Ui g[YgWł'cggYb'k YfXYb"GY'Vgh'X]Y'[Yd'UbhY'C ZZ]bY!Bi hni b['Øgh
b]Włh'U`Y'DfcV`Ya Yž'XU'X]Y'6YX]Ybi b['X][]hU`Yf'K U`Yhg'cXYf
5ddg'ZØf'a UbWłY'6Yj Ò`_Yfi b[g[fi ddYb`Y]bY'6Uff]YfY'XUfghY`Yb
_ØbbhY"8]Yg'k]fZh'X]Y': fU[Y'Ui Z'cV`X]Y'9]bZØ\fi b['hUhgÅWł`]Wł
U`Yb'ni [i hY_ca a h'cXYf'cV'g]Y'i bVYUVg]Włh][h'bi Y'i: cfa Yb'XYf

I b[`Y]W\Y]h'gW UZh"

GW `]Y» `]W `ghY\h'X]Y`fYW h]WY`i bX`[YgY`gW UZh]WY`5_nYdhUbn
]a `FUi a ``8]Y`9I !?ca a]gg]cb`\Uhink Uf`Y]bYb` ; YgYhnYgYbtk i fZ
j cf[Y`Y[hž`XcW`X]Y`YbX[Ø`h][Y`9bhgWY]Xi b[`Àb[h]j ca
9i fcdÀ]gWYb`FUh`i bX`DUf`Ua`Ybh`UV` `Y]b`DfcnYggž`XYf`š\`fY
XUi Yfb`_ÒbbhY``Ni XYa` `]gh`i b`_Ufž`cV`6Øf[Yf]bbYb`i bX`6Øf[Yf
VYfY]h'g]bXž`Y]bY`X][]hU`Y`K`À\fi b[`Ubni bY`a`Ybž`]bgVYgcbXYfY
k Ybb`6YXYb`_Yb`\]bg]W`h]W` , VYfk UW`i b[`i bX`8UhYbgW`i hn
b]W`h`Ui g[YfÀ`i a`h`k`YfXYb``8]Y`6Yf`]b` ; fci d`VYhcbhž`XUgg`Y]bY
9]bZØ\fi b[`b]W`h`Ui Z`?cghYb`XYf` ; fi bXfYW`hY`YfZc`[Yb`XUfZž`k Ug
X]Y`8]g`_i gg]cb`i a` `Y]b`Ui g[Yk`c[YbYg`?cbnYdh`k`Y]hYf`Ub`Y]nh"

9]bZ`i gg`Ui Z`XUg`6Ub`_Yb`gmghYa



GhY`Yb`k`]f`i`bg`j`cfž`k`]Y`h]YZ[fY]ZYbX`g]W`X]Y` :]bUbn`UbXgW`UZh
9i fcdUg`j`YfÀbXYfb`_ÒbbhYž`k`Ybb`Y]bY`X][]hU`Y`K`À\fi b[`X]fY`_h
j`cb`XYf`NYbhfU`VUb`_`Ui g[Y[YVYb`k`]fX` `Y]b`GnYbUf]cž`XUg
hfUX]h]cbY`Y`6Ub`_Yb`j`cf`i`b[YU`b`hY`<YfUi gZcfXYfi b[Yb`ghY``h"
8Yf`X][]hU`Y`9i fcž`Y]b`Dfc`Y`_h`XYf`9i fcdÀ]gWYb`NYbhfU`VUb`_`

f9N6Ł'gY]h'>`]&\$&%žj Yfgdf]Wł h'bi]Wł h'bi f'Y]bY'F Yj c'i h]cb'ja
NU\`i b[gj Yf_Y\ fž'gcbXYfb' _ÖbbhY'Ui Wł'X]Y'; fi bXZYghYb'XYg
VYghY\YbXYb':]bUbngmghYa g'YfgWł ØhYfb'"K Å\ fYbX'Yf'U'g
9f[Åbni b['ni a' '6Uf[Y'X'i bX'6Ub_[i h\UVYb'[YXUWł h']ghž'k]fZh
gY]bY'9]bZØ\fi b[': fU[Yb'Ui Zž'k]Y'Yf'X]Y'F c''Y'XYf
; YgWł ÅZhgVUb_Ybž'X]Y'@]ei]X]hÅhi bX'X]Y'[YgUa hY
K]fhgWł UZhghfi _hi f'VYY]bZi ggYb'k]fX"

9]b'nybhfU'Yf'Di b_h'XYf'8]g_i gg]cb']gh'XYf'dchYbn]Y''Y
9]b'U[YbUVZi gg'j cb'; YgWł ÅZhgVUb_Yb'\]b'ni 'NYbhfU'VUb__cbhYb"
K Ybb'6Øf[Yf'i bX'i bhYfbY\ a Yb'X]fY_h'Ni [Ub['ni 'Y]bYa
X][]hU'Yb'9i fc'Yf\U'hYbž'_ÖbbhYb'g]Y'Y]bYb'HY]']\fYf'; Y'XYf'j cb
hfUX]h]cbY''Yb'6Ub__cbhYb'UVn]Y\Ybž'XU'NYbhfU'VUb_[Y'X'U'g
g]Wł YfYf'k U\ f[Ybca a Yb'k]fX' ']bgVYgcbXYfY']b'?f]gYbnY]hYb"
8]YgYg'GnYbUf]c'V]f[h'XUg'F]g]_cž'X]Y'@]ei]X]hÅh'XYf'6Ub_Yb'ni
gWł k ÅWł Yb'i bX']\fY': Å\][_Y]h'ni f'?fYX]hj Yf[UVY
Y]bni gWł fÅb_Yb''8]Y'9N6'j Yfgi Wł hž'X]YgYa 'DfcV'Ya 'Xi fWł
C VYf[fYbnYb'ZØf'X][]hU'Y'9i fc!9]b'U[Yb'Ybh[Y[Ybni k]f_Ybž'XcWł
X]Y'[YbUi Y'5i g[YghU'hi b['V'Y]Vh'i b_'Uf'"Gc`Wł Y'6YXYb_Yb
k YfXYb'Ui Wł'Ui ZXYf'K]_]dYX]U!GY]hY'ni a'X][]hU'Yb'9i fc
h\Ya Uh]g]Yfhž'k c'Ui Z'dchYbn]Y''Y'; YZU\ fYb'ZØf'XUg'6Ub_Yb'gmghYa
\]b[Yk]YgYb'k]fX"

8]Y'F c''Y'XYf'6Ub_Yb'U'g'J Yfa]hh'Yf'ja 'NU\`i b[gj Yf_Y\ f'_ÖbbhY
YVYbZU`g'i bhYf'8fi W_ '[YfUhYb''8Yf'X][]hU'Y'9i fc'Yfa Ò[`]Wł h
X]fY_hY'HfUbgU_h]cbYb'nk]gWł Yb'Bi hnYfb'i bX'XYf'NYbhfU'VUb_ž
k cXi fWł 'hfUX]h]cbY''Y'Nk]gWł Yb\ ÅbX'Yf'k]Y'; YgWł ÅZhgVUb_Yb'Ub
6YXYi hi b['j Yf']YfYb' _ÖbbhYb''8]Yg'k ØfXY'b]Wł h'bi f']\fY
9]bbU\ a Yb'Ui g'HfUbgU_h]cbg[YVØ\ fYb'gWł a Å'Yfbž'gcbXYfb'Ui Wł
]\fY'ghfUHY[]gWł Y'Dcg]h]cb'ja ':]bUbngmghYa 'gWł k ÅWł Yb''5i ZXYf
965XUm'&\$&) ž'k]Y'j cb':]bYI hfU'VYf]Wł hYhž'VYhcbhY'6fi bc
A Y''UXc'j cb'6BD'DUF]VUg'X]Y'Bchk YbX][_Y]h'YZZ]n]Yb'hYf
?ca a i b[_Uh]cb'nk]gWł Yb'NYbhfU'VUb_! 'i bX'6Ub__cbhYbž'i a
gc`Wł Y'GdUbbi b[Yb'ni 'a]b]a]YfYb''; `Y]Wł nY]h]['k]Yg'5bXfYU
A Y]Yf'j cb'XYf'8N'6Ub_'XUfUi Z\]bž'XUgg'6Ub_Yb'Yhnh'@Øgi b[Yb
ZØf'I bhYfbY\ a Ybg_i bXYb'Ybhk]W_Y'b'a ØggYbž'i a
k YhhVYk YfVgZÅ\]['ni 'V'Y]VYb"

5i ZXYf'UbXYfYb'GY]hY' _ÖbbhY'XYf'X][]hU'Y'9i fc'Ui W'7\UbW' b'ZØf
XUg':]bUbngmghYa 'V]YhYbž']bXYa 'Yf'XYb'K YhhVYk YfV' i bX'X]Y
≠bcj Uh]cb'Ub fY[h''6Ub_Yb' _ÖbbhYb' [Ynk i b[Yb'k YfXYbž']\fY
8]Ybgh'Y]ghi b[Yb'ni 'a cXYfb]g]YfYbž'Yhk U'Xi fW'X]Y'9btk]W' i b[
bYi Yf'X][]hU'Yf'DfcXi _hY'cXYf'VYbi hnYfZfYi bX']W'YfYf
GW' b]hghY''Ybž'k]Y'J]''Y'Gc]bhi 'j cb' BcfXYU'6Ub_ 'Ui ZXYf'965XUm
&\$&) '\Yfj cf\cV''Ni XYa ' _ÖbbhY'X]Y'Yf\ Ò\hY' GhUV]'hÄhž'X]Y'Xi fW'
NYbhfU'VUb_[Y'X' [Yk Ä\ f'Y]ghYh'k]fXž'XUg'J YfhfUi Yb']b'XUg
[YgUa hY':]bUbngmghYa 'ghÄf_Yb' 'Y]b'5gdY_hž'XYb'X]Y'9N6'U'g
Y]bYg']\fYf'<Ui dhn]Y'Y' bYbbh''8YbbcW' V'Y]Vh'X]Y': fU[Yž'cV
_Y]bYfY'6Ub_Ybž'X]Y'k Yb][Yf'F Yggci fW' b'ZØf'hYW'bc'c []gW'Y
5bdUggi b[Yb'\UVYbž'a]h'X]YgYb'J YfÄbXYfi b[Yb'GW'f]hh'\U'hYb
_ÖbbYb''

9]b'k Y]hYfYf'5gdY_h'VYhf]Zh'X]Y'5i gk]f_i b[Yb'Ui Z'X]Y'; Y'Xdc'h]_
i bX'X]Y'Z]bUbn]Y''Y'GhUV]'hÄh'XYf'9i fcncbY''K Ä\ fYbX'XYf'X][]hU'Y
9i fc'X]Y'a cbYhÄfY'Gci j YfÄb]hÄh'ghÄf_Yb'gc''ž']bXYa 'Yf'X]Y'F c''Y
XYg'NYbhfU'VUb_[Y'XYg'U'g'6Ug]g'g]W'Yfhž' _ÖbbhY'Yf'Ui W'
i bj cf\Yf[YgY\YbY'9ZY_hY'Ui Z'X]Y'GhYi Yfi b['XYf'; Y'Xa Yb[Y
\UVYb''K Ybb' [fc»Y'Gi a a Yb']b'X][]hU'Y'9i fc' i a [Yk UbXY'h
k YfXYbž' _ÖbbhY'X]Yg'X]Y'K]f_gUa _Y]h'hfUX]h]cbY''Yf
[Y'Xdc'h]gW'Yf' ≠ghfi a YbhY'k]Y'N]bggÄmY'VYY]bhfÄW'h][Yb"
; 'Y]W'nY]h]['V]f[h'X]Y'nYbhfU'Y'GhYi Yfi b['XYg'X][]hU'Yb'9i fcg'XUg
F]g]_cž'XUgg'X]Y'i bUV\Äb' [][_Y]h'XYf'9N6']b': fU[Y' [YghY''h'k]fXž'
]bgVYgcbXYfY'k Ybb'dc'h]gW'Yf'8fi W'Ui Z'X]Y'5i g[YghU'hi b['XYf'
K Ä\ fi b['Ui g[YØVh'k]fX''

8]Y'8]g_i gg]cb' i a '@]ei]X]hÄhga UbU[Ya Ybž'k]Y'g]Y'Ui Z'XYf'
965XUm&\$&) [YZØ\fh'k i fXYž'j YfXYi h]W'h'ni XYa ž'k]Y'Yb['XYf'
X][]hU'Y'9i fc'a]h'XYf': i b_h]cbgk Y]gY'XYg':]bUbngmghYa g
j Yf_bØdZn]gh''9i dYfhYb'k]Y'5'Yi UbXfY'9WUd]Yf'j cb'>D''A cf[Ub
VYhcbhYb'X]Y'6YXYi hi b['j cb'G]W'hVUf_Y]hž'?cbhfc''Y' i bX
C dh]a]Yfi b['XYf'@]ei]X]hÄh' '5gdY_hYž'X]Y'Xi fW'X]Y'9]bZØ\fi b[
Y]bYf'X][]hU'Yb'K Ä\ fi b['bYi 'VYk YfhYh'k YfXYb'a ØggYb''6Ub_Yb
_ÖbbhYb' [Ynk i b[Yb'gY]bž']\fY'GhUHy[]Yb'Ubni dUggYbž'i a 'a]h
XYb'j YfÄbXYfhYb'; Y'XZØggYb' i a ni [Y\Ybž'k Ä\ fYbX'X]Y'9N6'Y]bY
6U'UbW'Z]bXYb'a i ggž'i a 'GhUV]'hÄh'ni [Yk Ä\ f'Y]ghYbž'c\ bY'XYb
A Uf_h'ni 'ghUf'_ni 'j YfnYffYb''

8 UhYbgWxi hn'i bX'G]WYf\Y]h



B Uj][]YfYb'k]f'Xi fW\XUg'i bg]W\hVUFY'BYhn'Ui g'8 UhYbž'XUg
i bgYfY'a cXYfbY'K Y'h'Xi fW\h]Y\hž'i bX'f]W\hYb'XYb'6']W_ 'Ui ZY]bY
XYf'Vf]gUbhYghYb': fU[Yb'fi bX'i a'XYb'X][]hU'Yb'9i fc.'K]Y'g]WYf
g]bX'i bgYfY'dYfgOb`]WYb'žZcfa Uh]cbYb']b'Y]bYf'ŸfUž']b'XYf'YXY
HfUbgU_h]cb'X][]hU'YfZUggh'k YfXYb'_ObbhY3'8]Y'9]bZØ\fi b['X]YgYf
j cb'XYf'9i fcdÅ]gWYb'NYbhU'VUb_'fØN6Ě[Yd'UbhYb'K Å\fi b[
Vf]b[h'b]W\h'bi f'hYW\h]gWY'žbcj Uh]cbYb'a]h]g]W\ž'gcbXYfb'Ui W\
h]YZ[fY]ZYbXY'6YXYb_Yb'\]bg]W\h]W'8 UhYbgWxi hn'i bX'G]WYf\Y]h"
8]YgY'5gdY_hY'g]bX'YbhgWY]XYbXž'XU'g]Y'XUg'J YfhfUi Yb'XYf
6Øf[Yf]bbYb'i bX'6Øf[Yf']b'Y]b'gc'WYg'GmghYa'a U» [YV'W\
VYY]bZi ggYb'k YfXYb"

⇒ 'Yfb'XYf'8 UhYbgWxi hnXYVUhY'ghY\h'XUg'FYW\h'Ui Z
]bZcfa Uh]cbY'Y'GY'VghVYgh]a a i b['Y]b'; fi bXgUhnž'XYf']b
9i fcdU'gY]h'Å\fnY\bhYb'Xi fW'; YgYhnY'k]Y'X]Y'8 UhYbgWxi hn!
; fi bXj YfcfXbi b['fB G; J C Ě[YgW\Øhnh'k]fX"8]YgYg'FYW\h
Yfa Ø['W\h'Yg'žX]j]Xi Ybž'ni 'YbhgWY]XYbž'k Yf'Ni [Ub['ni']\fYb
dYfgOb`]WYb'8 UhYb'\Uh"8cW\XYf'X][]hU'Y'9i fc'_ObbhY'X]YgYg

Df]bn]d`Ui Z`X]Y`DfcVY`ghY`Ybž`XU`HfUbgU_h]cbYb`dchYbn]Y`
bUW`j YfZc`[VUf`g]bX`i bX`X][]hU`Y`Gdi fYb`\\]bhYf`UggYbž`ja
; Y[YbgUhn`ni `Ubcbma Yb`6Uf[Y`XnU\\`i b[Yb`"K]Y`Ui Z`K]_]dYX]U
ni a `H`Y a U`8UhYbgW`i hn`Yf`Äi hYfhž`n]Y`h`XYf`GW`i hn`XUfUi Z`UVž
XYb` [`ÄgYfbYb`A YbgW`Yb` i bX`ghUUh`]W`Y` , VYfk UW`i b[`ni
j Yf\\]bXYfb` `Y]b`5b`]Y[Ybž`XUg`VY]`Y]bYf`nYbhfU`[YghYi YfhYb
X][]hU`Yb`K Ä`fi b[`VYgcbXYfg`fY`Yj Ubh`k]fX"

8]Y`Gcf[Y`j cf` , VYfk UW`i b[`]gh`b]W`h`i bVY[f0bXYh`" ? f]h]_Yf
VYZ0fW`hYbž`XUgg`F Y[]Yfi b[Yb`cXYf` :]bUbn]bgh]hi hY`Xi fW` `XYb
X][]hU`Yb`9i fc`Ni [f]Z`Ui Z`XYhU]`YfhY` :]bUbnXUhYb`Yf`U`hYb
_0bbhYbž`k Ug`DfcZ`]b[`cXYf`gc[Uf`Z]bUbn]Y`Y`NYbgi f`Yfa 0[`]W`Yb
k 0fXY`"8]Y`9N6` \\Uh`nk Uf`Ub[Y`0bX][[hž`X]Y`8UhYbj YfUfVY]hi b[
Ui Z`XUg`bchk YbX][Y`A U» `ni `VYgW`fÄb`_Yb`i bX`A U» bU`a Yb`k]Y
DgYi Xcbma]g]Yfi b[`ni `df0ZYbž`XcW`X]Y` [YbUi Y`i a gYhni b[
V`Y]Vh`i b`_Uf`"6YgcbXYfg`gYbg]V`Y`8UhYbž`k]Y`Yhk U
6Ub`_]bZcfa Uh]cbYbž`YfZc`fXYfb` \\0W`ghYb`GW`i hnž`XU`\\f
A]ggVfUi W` [fUj]YfYbXY` : c` [Yb`Z0f`9]bnY`dYfgcbYb` \\UVYb
_0bbhY`"8]YgY`6YXYb`_Yb`gd]Y[Y`b`g]W`Ui W`]b`XYf`8]g`i gg]cb
0VYf`X]Y`ghY][YbXYb`5bZc`fXYfi b[Yb`Ub`XYb`8UhYbgW`i hn`k]XYfž
k]Y`g]Y`Ui Z`? YmYX`"XY`VYgW`f]YVYb`k YfXYbž`k c`Ui Z`X]Y
k UW`gYbXY`6YXYi hi b[`j cb`GW`i hma U» bU`a Yb`ja `X][]hU`Yb
NY]hU`hYf`\\]b[Yk]YgYb`k]fX"

5i Z`XYf`G]W`Yf`\\Y]hggY]hY` `Ui Yfb`YVYbZU`g`Yf`\\YV`]W`Y`F]g]_Yb`"8]Y
GdY]W`Yfi b[`j cb` :]bUbnXUhYb`]b`X][]hU`Yb`GmghYa Yb`a UW`h`XYb
X][]hU`Yb`9i fc`ni `Y]bYa `UhfU_h]j Yb`N]Y`Z0f`7mVYfUb[f]ZZY"
< UW`_Yf`_0bbhYb`j Yfgi W`Ybž`Ni [Ub[`ni `X][]hU`Yb`K U`Yhg`cXYf
nYbhfU`Yb`8UhYbVUb`_Yb`ni `Yf`Ub[Ybž`k Ug`b]W`h`bi f`Z]bUbn]Y`Y`Y
J Yf`i ghY`Z0f`Bi hnYfž`gcbXYfb`Ui W`Y]bYb`J YfhfUi Ybgj Yf`i gh`]b`XUg
[YgUa hY`GmghYa `ni f` : c` [Y`\\ÄhhY`"8]Y`9N6`UfVY]hYh`Ub
hYW`b]gW`Yb`A U» bU`a Yb`ni f`K U`fi b[`j cb`J YfhfUi `]W`_Y]hž
J YfZ0[VUf`_Y]h`i bX` ðhY[f]hÄ`h`XYf`8UhYb` `5gdY`_hYž`X]Y`]b`XYf` ≠!
G]W`Yf`\\Y]h`nYbhfU`g]bX`"8cW`X]Y`? ca`d`YI]hÄ`h`gc`W`Yf`GmghYa Y
i bX`X]Y`ghYh][Y`K Y]hYfYb`k]W`i b[`j cb`5b[f]Z]ga Yh`cXYb`UggYb
Nk Y]ZY`Ub`Y]bYf`UVgc`i hYb`G]W`Yf`\\Y]h`VYghY`\\Yb"

9]b`k Y]hYfYf`Di b`_h]gh`XUg`a Ub[Y`bXY`6Yk i gghgY]b`j]Y`Yf`

A YbgWXYb`Z0f`8UhYbgWxi mZfU[Yb"J]Y`Y`g]bX`a]h`XYb
6Ygh]a a i b[Yb`XYf`8G; J C`cXYf`XYb`F]g]_Yb`X][]hU`Yf
8UhYbj YfUfVY]hi b[`b]W`h`j YfhfUi h`k Ug`Xi fW`i bUW`hgUa _Y]h`
Yhk U`Xi fW`i bVYUi Zg]W`h][hY` ; Yf`AhY`cXYf`i bg]W`YfY`DUggk 0fhYf`
ni `G]W`Yf`Y]hg`0W`Yb`Z0`fYb`_Ubb"i bhYfbY`a Yb`i bX
=bgh]hi h]cbYb`z`X]Y`XYb`X][]hU`Yb`9i fc`VYfY]hghY`Yb`z`a 0ggYb`XU`Yf
b]W`h`bi f`hYW`b]gW`Y`GW`i hna YW`Ub]ga Yb`ja d`Ya Ybh]YfYb`z
gcbXYfb`Ui W`Xi fW`GW`i `i b[Yb`i bX`5i Z`Afi b[`XUg
6Yk i gghgY]b`Z0fXYfb" `C `bY`X]YgY`A U» bU`a Yb`_0bbhYb`gY`Vgh`X]Y
VYghYb`G]W`Yf`Y]hgj cf`_Y`fi b[Yb`k]f`i b[g`cg`V`Y]VYb`z`XU`XYf
a YbgW`]W`Y` : U`hc`f`c`Zh`X]Y`gW`k A`W`ghY`GhY`Y`Y`]b`XYf`? YhhY
XUfghY`h"

8]Y`6U`UbW`nk]gW`Yb`8UhYbgWxi hn`i bX` : i b_h]cbU`]h`h`ghY`h`Y]bY
ni g`Am`]W`Y`< YfUi gZcfXYfi b[`XUf" `K A`fYbX`C`ZZ]bY!NU` `i b[Yb
i bX`DYfY!hc!DYfY!HfUbgU_h]cbYb`XYb`8UhYbUi ghUi gW`a]b]a]YfYb
_0bbhYb`z`YfZcfXYfb`VYgh]a a hY` : i b_h]cbYb`k]Y
6Yhfi [gdf`Aj Ybh]cb`cXYf`X]Y`9]b`U`hi b[`[YgYhm`]W`Yf`J c f g W`f]ZhYb
Y]bY` [Yk]ggY`B UW`j YfZc` [VUf`_Y]h" `<]Yf`ghY`h`XYf`8UhYbgWxi hn`c`Zh
ja `?cbZ]_h`a]h`UbXYfYb`N]Y`Yb`k]Y`XYf`?f]a]bU`]h`hgVY`_Aa dZi b[z
Y]b`GdUbbi b[gZ`X`z`XUg`dc`h]gW`i bX` [YgY`gW`UZh]W`_cbhfcj Yfg
X]g_i h]Yfh`k]fX" `8]Y` : fU[Yz`k]Y`j]Y`Df]j Uhgd`A`fY`a Ub`ni [i bghYb
j cb`G]W`Yf`Y]h`cXYf`9ZZ]n]Ybn`cdZYfb`gc`hY`z`V`Y]Vh`c`ZZYb`i bX`k]fX
X]Y`k Y]hYfY`9bhk]W`i b[`XYg`X][]hU`Yb`9i fcg`a U» [YV`]W`dfA[Yb"

=bhYfbUh]cbU`Y`DYfgdY_h]j Yb



6Y[YVYb'k]f'i bg'Ui ZY]bY['cVU'Y'FY]gYž'i a 'ni 'Yf_i bXYbž'k]Y
XYf'X][]hU'Y'9i fc'a 'J Yf['Y]W'ni 'À\b']W'Yb'6YghfYVi b[Yb
k Y'hk Y]h'UVgW'bY]XYh' 'Y]b'K Yh'Ui Zi a 'X]Y'Ni _i bZ'hXYg'; Y'XYgž
XYf'`Àb[gh'VY[cbbYb'\Uh"K À\fybX'X]Y'9i fcdÀ]gW'Y'NYbhfU'VUb_
f9N6Ł'gY]h'ž ']'&\$&%Ub'Y]bYa 'X][]hU'Yb'NU\ 'i b[ga]hhY'`UfVY]hYhž
XUg'XYb'd\mg]gW'Yb'9i fc'Yf[ÀbnYb'gc``ž]g]bX'UbXYfY'@ÀbXYf'i bX
FY[]cbYb'VYfY]hg'k Y]hYf'cXYf'j YfZc`[Yb'[Ubn'Y][YbY'5bgÀhnY"
8]YgYf'J Yf['Y]W'VY'Yi W'hYhž'k Ug'XYb'X][]hU'Yb'9i fc'j cb
=b]h]Uh]j Yb'k]Y'XYa 'X][]hU'Yb'M Ub']b'7\]bUž'XYf'9i? fcbU']b
GW'k YXYb'cXYf'UbXYfYb'7YbhfU'6Ub_8][]hU'7i ffYbW]Yg
f7687gŁ'i bhYfgW'Y]XYhž'i bX'nY][hž'k Y'W'Y'@Y\fyb'9i fcdU'n]Y\Yb
_ÖbbhY"

6Y[]bbYb'k]f'a]h'7\]bUž'k c'XYf'X][]hU'Y'M Ubž'Ui W'U'g'Y!7BM
VY_Ubbhž'VYfY]hg']b'Zc fh[YgW'f]hYbYb'D]c'hd\UgYb'[YhYghYh'k]fX"
=a ' ; Y[YbgUhn'ni a 'X][]hU'Yb'9i fcž'XYf'bcW']b'XYf
J cfVYfY]hi b[gd\UgY'ghYW_h'i bX'ZfØ\YghYbg'&\$&) !&\$&* 'Y]b[YZØ\fh
k YfXYb'_ÖbbhYž'\Uh'X]Y'J c`_gVUb_'j cb'7\]bU'fD6c7Ł'gY]h'&\$%('Ub
]\fyf'X][]hU'Yb'K À\fi b['[YUfVY]hYh'i bX'g]Y']b'a Y\fyfYb'GhÀXhYb
ZÀW'YbXYW_YbX'YfdfcVh"8Yf'Y!7BMn]Y'h'XUfUi Z'UVž'6Uf[Y'X
hY]'k Y]gY'ni 'YfgYhnYb'i bX'X]Y'?cbhfc``Y'ØVYf'XYb':]bUbngY_hcf'ni
j YfghÀf_Ybž'k À\fybX'Yf'['Y]W'nY]h][]bhYfbUh]cbU'Y'HfUbG_U_h]cbYb
Yf'Y]W'hYfh'5bXYfg'U'g'XYf'X][]hU'Y'9i fcž'XYf'6Uf[Y'X'Yf[ÀbnYb
i bX'b]W'hYfgYhnYb'gc``ž]gW'Y]bh'XYf'X][]hU'Y'M Ub'ghÀf_Yf'Ui Z
ghUUh]W'Y' , VYfk UW' i b['Ui g[Y'Y[h'ni 'gY]bž'k Ug

8 UhYbgWk i hnVYXYb_Yb`Ui Zk]fZž`X]Y`]b`9i fcdU`Y]bY`nYbhfU`Y`F c`Y`gd]Y`Yb"

⊕`GWk YXYb`k]YXYfi a`j YfZc`[h`X]Y`F]_gVUb`_a]h`XYf`9!`? fcbU`Y]bYb`5bgUhnž`XYf`XYa`X][]hU`Yb`9i fc`]b`j]Y`Yf`Y`<]bg]Wk h`Å`bY`h`6Y]XY`Dfc`Y`_hY`VYhcbYb`X]Y`6YXYi hi b[`j`cb`NYbhfU`VUb`_[Y`X`U`g`ghUV]`Y`6Ug]g`]b`Y]bYf`X][]hU`]g]YfhYb`K`Y`h`i`bX`ghfYVYb`Ubž`J`YfhfUi`Yb`]b`X][]hU`Y`NU`i`b[Yb`ni`ZØfXYfb`"8]Y`9!`? fcbUž`XYfYb`D]`chd`UgY`gY]h`&\$`\$``Åi`Zž`_cbnYbhf]Yfh]g]Wk`Y`XcWk`ghÅf`_Yf`Ui`Z`X]Y`5bdUggi`b[`Ub`Y]bY`bU`Yni`VUf[Y`X`cgY`;`YgY`gWk`UZh`Y`Y]b`?`cbhYi`hž`XYf`]b`9i fcdUž`k`c`6Uf[Y`X`k`Y]hYf`Y]b`Y]bY`k`]Wk]h][Y`F`c`Y`gd]Y`hž`k`Yb][Yf`Ui`g[YdfÅ[h`]gh`K`Å`fYbX`X]Y`9N6`Y]b`<`U`hY`]a`]h`nk`]gWk`Yb`)`\$`\$`i`bX`" "\$`\$`9i fc`ZØf`XYb`X][]hU`Yb`9i fc`X]g`_i`h]Yfhž`i`a`6Ub`_YbUVZØggY`ni`j`Yf`Y]bXYfbž`g]bX`gc`Wk`Y`8YhU]`g`VY]`XYf`9!`?`fcbU`bcWk`k`Yb][Yf`_cb`_fYhž`k`Ug`Ui`Zi`bhYfgWk]YX`]Wk`Y`Df]cf]hÅhYb`]b`XYf`i`a`gYhni`b[`]b`k`Y]gh"

9]b`6`]W`_Ui`Z`X]Y`6U`Ua`Ug`nY][hž`k`]Y`gWk`bY`Y`Y]bY`X][]hU`Y`K`Å`fi`b[`F`YU]hÅh`k`YfXYb`_`Ubb`"8`cfh`k`i`fXY`XYf`GUbX`8`c`Uf`VYfY]hg`&\$`\$`U`g`k`Y`hk`Y]h`YfghY`j`c`ghÅbX][`Y]b[YZØ`fhY`7`6`8`7`UbW]Yfh`8]YgY`⊕]h]Uh]j`Y`n]Y`h`j`cf`U`Y`Ya`_Ui`Z`Z]b`Ub`n]Y`Y`⊕`_i`g]cb`UVž]bXYa`_g]Y`UV[Y`Y[YbY`⊕`gY`VYk`c`b`Yf`c`b`Y`Ni`[Ub[`ni`hfUX]h]cbY`Y`b`6Ub`_Yb`YffY]Wk`h`Y]b`N]Y`ž`XUg`Ui`Wk`XYf`X][]hU`Y`9i`fc`j`YfZc`[h`8`c`Wk`k`Å`fYbX`XYf`GUbX`8`c`Uf`Ui`Z[fi`bX`XYf`_`Y]bYb`K`]fhgWk`UZh]g`fØ»`Y`XYf`6U`Ua`Ug`ØVYfgWk`Ui`VUfY`5i`gk`]f`_i`b[Yb`U`hž`ghY`h`XYf`X][]hU`Y`9i`fc`j`cf`XYf`<`YfUi`gZc`fXYfi`b[ž`Y]b`Y`hYfc[YbYg`:]b`UbngmghYa`_a`]h`&\$`@`ÅbXYfb`ni`j`YfY]bYb`"9]b`XYhU]`YfhYf`_`VYfv`]W`_ØVYf`XYb`X][]hU`Yb`9i`fc`i`bX`gY]bY`N]Y`Y`Z]bXYh]g]Wk`_Ui`Z`XYf`Yb[`]gWk`gdfUWk][Yb`K`_]dYX]U!GY]hY`ni`a`X][]hU`Yb`9i`fc`ž`X]Y`Ui`Wk`X]Y`I`bhYfgWk]YXY`ni`UbXYfYb`7`6`8`7`g`UbXYi`hYh"

⊕`XYb`i`G5`Y]b[Y[Yb`[]Vh`Yg`bcWk`_Y]bY`_cb`_fYhY`9]bZØ`fi`b[Y]bYf`X][]hU`Yb`K`Å`fi`b[ž`cV`k`c`X]Y`:]YXYfU`F`YgYfj`Y`j`YfgWk]YXYbY`A`cXY`Y`dfØZh`8Yf`:]c`_i`g`]Y[h`]Yf`ghÅf`_Yf`Ui`Z`XYf`GhUV]`hÅh`XYg`[`c`VU`Yb`:]b`UbngmghYa`gž`XU`XYf`I`G]8`c`Uf`U`g`K`Y`hfYgYfj`Yk`Å`fi`b[`Y]bY`VYgcbXYfY`F`c`Y`gd]Y`h`"⊕`j`Yf[`Y]Wk`XUni`df]cf]g]Yfh`XYf`X][]hU`Y`9i`fc`X]Y`a`cbYhÅfY`Gci`j`YfÅb]hÅh`XYf`

9i fcncbY'i bX'X]Y'9]bXÅa a i b['Ui g`ÀbX]gWXYf'X][]hU`Yf
K Å\fi b[Ybž'i a 'Z]bUbn]Y`Y'GhUV]`]hÅh'ni 'g]WXYfb"K Å\fybX'X]Y
I G5'6YXYb_Yb'\]bg]W'h]W'`df]j UHYf'?fmdhck Å\fi b[Yb'i bX'XYfYb
FY[i `]Yfi b['a 'JcfXYf[fi bX'ghY\Ybž'VYhcbh'X]Y'9N6
≠bcj Uh]cbYb'ja '9]bnY'\UbXY'i bX'XYb'GW'i hn'j cf'[Ycdc`]h]gWXYb
F]g]_Yb"

9]b'k Y]hYfYf'`]bhYfYggUbhYf'J Yf[`Y]W'gd i b_h]gh'B][Yf]U'a]h'XYa
YBU]fUž'XYf'&\$&%Y]b[YZØ\fh'k i fXY"Y\`b`]W'k]Y'XYf'X][]hU`Y'9i fc
gc``XYf'YBU]fU'Z]bUbn]Y`Y'≠_i g]cb'ZØfXYfb'i bX'XYb'Ni [Ub['ni
NU\`i b[ga]hY`b'Yf'Y]W'hYfb"8cW'k Å\fybX'B][Yf]U'a]h
<YfUi gZcfXYfi b[Yb'k]Y' [Yf]b[Yf'5_nYdhUbn'i bX'hYW'b]gWXYb
<ØfXYb'_Åa dZh'_ØbbhY'XYf'X][]hU`Y'9i fc'j cb'XYf'ghÅf_YfYb
≠ZfUghfi _hi f'i bX'XYa '\Ø\YfYb'8][]hU]g]Yfi b[g[fUX']b'9i fcdU
dfcZ]h]YfYb"8YbbcW'`nY][h'XYf'YBU]fUž'XUgg'_i `hi fY`Y'i bX
k]fhgW'UZh]W'Y'i bhYfgW]YXY'X]Y'9]bZØ\fi b[`Y]bYf'7687
a U» [YV`]W'VYY]bZi ggYb' `Y]b'5gdY_hž'XYb'Ui W'X]Y'9N6'VY]`XYf
≠hY[fUh]cb']b'j YfgW]YXYbY'9i !@ÅbXYf'VYfØW_g]W'h][Yb'a i gg"

8Yf'J Yf[`Y]W'j YfXYi h]W'hž'XUgg'XYf'X][]hU`Y'9i fc']b'Y]bYa
[`cVU`Yb'?cbhYI h'ghY\hž']b'XYa `YXY'≠]h]Uh]j Y'Y][YbY
GW'k Yfdi b_hY'gYhnh'`gY]Yg'ghUUh]W'Y'?cbhfc``Y']b'7\]bUž
6Uf[Y'XfYXi _h]cb']b'GW'k YXYb'cXYf'≠_i g]cb']b'XYb'6U\Ua Ug
i bX'B][Yf]U"9i fcdU'gW'Y]bh'a]h'gY]bYa `: c_i g'Ui Z8UhYbgW'i hnž
k]Y'Yf']b'XYf'8G; J C'j YfUb_Yfh]ghž'i bX'XYf'6U'UbW'`nk]gWXYb
≠bcj Uh]cb'i bX'GhUV]`]hÅh'Y]bY'A]hY`dcg]h]cb'Y]bni bY`a Yb"
K Y`W'Y`@Y\fyb'Ui g'XYb'9fZU\fi b[Yb'UbXYfYf'@ÅbXYf'[Ync[Yb
k YfXYb'_ØbbYb'i bX'k]Y'g]W'XYf'X][]hU`Y'9i fc``Yhnh]W'
dcg]h]cb]YfYb'k]fXž'V'Y]Vh'Y]bY'gdUbbYbXY': fU[Y'ZØf'X]Y
_ca a YbXYb'X\fy"

F Y[i `Uhc f]gW'Y'F U\ a YbVYX]b[i b[Yb



J Yfh]YZYb`k]f`i bg`]b`XUg`_ca d`YI Y` ; YZØ[Y`j cb` ; YgYhnYb`i bX
J cfgWk f]ZhYbž`XUg`XYb`K Y[`ZØf`XYb`X][]hU`Yb`9i fc`YVbYb` `cXYf
YfgWk k YfYb` ` _ÖbbhYž`i bX`VYhfUWk hYbž`k]Y`fYWk h`]Wk Y
F U\ a YbVYX]b[i b[Yb`X]Y`9]bZØ\fi b[`X]YgYf`]bbcj Uh]j Yb
K Å\fi b[`dfÅ[Yb`"8]Y`9i fcdÅ]gWk Y`NYbhfU`VUb`_f9N6Ł`a U[`X]Y
hfY]VYbXY`? fUZh`\]bhYf`XYa `Dfc`Y`_hgY]bž`XcWk `c\`bY`Y]b`gc`]XYg
fY[i `Uhc f]gWk Yg` : i bXUa Ybh`V`Y]Vh`X]Y`i a gYhni b[`Y]b`ZYfbYg`N]Y`"
8]Y`fYWk h`]Wk Yb`i bX`fY[i `Uhc f]gWk Yb`5gdY`_hYž`X]Y`XYb`X][]hU`Yb
9i fc`VYhfYZZYbž`g]bX`j]Y`gWk]Wk h][`i bX`YfZcfXYfb`Y]bY`Yb[Y
5Vgh]a a i b[`nk]gWk Yb`j YfgWk]YXYbYb`9i !`bgh]hi h]cbYbž`i a
gck c`\`_`bcbj Uh]cb`U`g`Ui Wk`GhUV`]hÅh`ni `[Yk Å\`f`Y]ghYb`"

9]b`nYbhfU`Yf`6Ui ghY]b`]gh`XYf` ; YgYhnYgj cfgWk`U[`XYf
9i fcdÅ]gWk Yb`?ca a]gg]cbž`XYf`]a `š b]`&\$&' `]a `F U\ a Yb`Y]bYg
G]b[`Y`7i ffYbWm`DUW`U[Y`j cf[Y`Y[h`k i fXY`"8]YgYg`DU`Yh
i a ZUgghink Y]`k YgYbh`]Wk Y`J cfgWk`Å[Y.`Ni a `Y]bYb`gc``Y]b
fYWk h`]Wk Yf`F U\ a Yb`ZØf`XYb`X][]hU`Yb`9i fc`[YgWk UZZYb`k YfXYbž
XYf`\`b`U`g`9f[Åbni b[`ni `6Uf[Y`X`YhUV`]Yfh`i bX`6Øf[Yfb`gck]Y
l bhYfbY\`a Yb`Y]bY`ni gÅhn`]Wk Yž`g]Wk YfY`C dh]cb`ZØf`X][]hU`Y
NU\`i b[Yb`V]YhYh`Ni a `UbXYfYb`n]Y`h`Y]b`k Y]hYfYf`J cfgWk`U[
XUfUi ZUVž`X]Y`F c``Y`j cb`9i fc`!6Ub`_bchYb`i bX`!A ØbnYb`U`g
[YgYhn`]Wk Yg`NU\`i b[ga]hY`ni `g]Wk Yfbž`i a `XYfYb`5`_nYdhUbn
i bX`Ni [Åb[`]Wk`_Y]h`ni `[Yk Å\`f`Y]ghYb`"8]YgY`Xi U`Y`GhfUhY[]Y

gd]Y[Y`hXYb`K i bgW`k]XYfz`HfUX]h]cb`i bX`A cXYfbY`]b`9]b`_Ub[
ni`Vf]b[Ybž`k]Y`Ui ZXYf`K YVgY]hY`XYf`**9i fcdÄ]gW`Yb**
? ca a]gg]cb`XYhU]`Yfh`VYgW`f]YVYb`k]fX"

8]Y`YbX[Ø`h][Y`9bhgW`Y]Xi b[`ØVYf`X]Y`9]bZØ\fi b[`XYg`X][]hU`Yb
9i fcg`]Y[h`YXcW`b]W`hU`Y]b`VY]`XYf`? ca a]gg]cb`cXYf`XYf`9N6"
8Yf`; YgYhnYgYbhk i fZ`a i gg`a]h`XYa`F Uh`XYf`9I`i bX`XYa
9i fcdÄ]gW`Yb`DUf`Ua Ybh`UV[Ygh]a a h`k YfXYb``Y]b`Df`cnYggž`XYf`
Ui Z[fi bX`XYf`i bhYfgW`]YX`]W`Yb`hYfYggYb`XYf`A]h[`]YXghUUhYb
i bX`dc`h]gW`Yb`Df]cf]h`hYb`š\`fY`]b`5bgdfi W`bY`a Yb`_ÖbbhY"
9fgh`k Ybb`X]YgY`Y[]g`Uh]j Yb`<ØfXYb`ØVYfk i bXYb`g]bXž`_Ubb`X]Y
9N6`Y]bY`j YfV]bX`]W`Y`9bhgW`Y]Xi b[`ØVYf`X]Y`5i g[UVY`hfYZZYbž
j cfUi gg]W`h]W`b]W`h]j cf`9bXY`&\$&) "`6]g`XU\]b`V`Y]Vh`XYf`X][]hU`Y
9i fc`]b`Y]bYf`GW`k YVY`nk]gW`Yb`hYW`b]gW`Yf`A UW`VUf`_Y]hi bX
fYW`h]W`Yf`i bg]W`Yf`Y]hž`k Ug`X]Y`D`Ubi b[`i bX`9bhk]W`i b[
YfgW`k Yfh"

DUFU`Y`XUni`U`h`X]Y`9N6`Ua`%"`Bcj Ya VYf`&\$&'`X]Y
J cfVYfY]hi b[gd`UgY`Y]b[Y`Y]hYhž`X]Y`ØVYf`nk Y]`š\`fY``Äi Zh`i bX
XUfUi Z`UVn]Y`hž`Y]b`F Y[Y`k Yf`_ZØf`XYb`X][]hU`Yb`9i fc`ni`YfghY`Yb
gck]Y`5bV]YhYf`ZØf`X]Y`D`UhZcfa`i bX`šZfUghfi`_hi`f`Ui`gni`k`Ä`Yb"
K]Y`Ui ZXYf`GY]hY`XYf`**8Yi hgW`Yb`6i bXYgVUb`_`Yf`Äi`hYfh`k]fXž`
k YfXYb`k`Ä`fYbX`X]YgYf`D`UgY`Ui`W`HYghg`Xi`fW`[YZØ`fhž`i`a
g]W`Yfni`ghY`Ybž`XUgg`X]Y`K`Ä`fi`b[`XYb`5bZcfXYfi`b[Yb`XYg
9i fcgmg]Ya`g`i bX`XYb`6YXØfZb]ggYb`XYf`Bi`hYf`[YfYW`h`k]fX`"8]Y
9f[YVb]ggY`XYf`; YgYhn[YVi`b[gVYfUhi`b[Yb`k`YfXYb`]b`X]Y
5i g[YghU`hi`b[`Y]bZ]Y» Ybž`k Ug`nY][hž`k]Y`Yb[`hYW`b]gW`Y`i bX
fYW`h]W`Y`9bhk]W`i`b[Yb`a`]hY]bUbXYf`j Yf`_bØdZh`g]bX"**

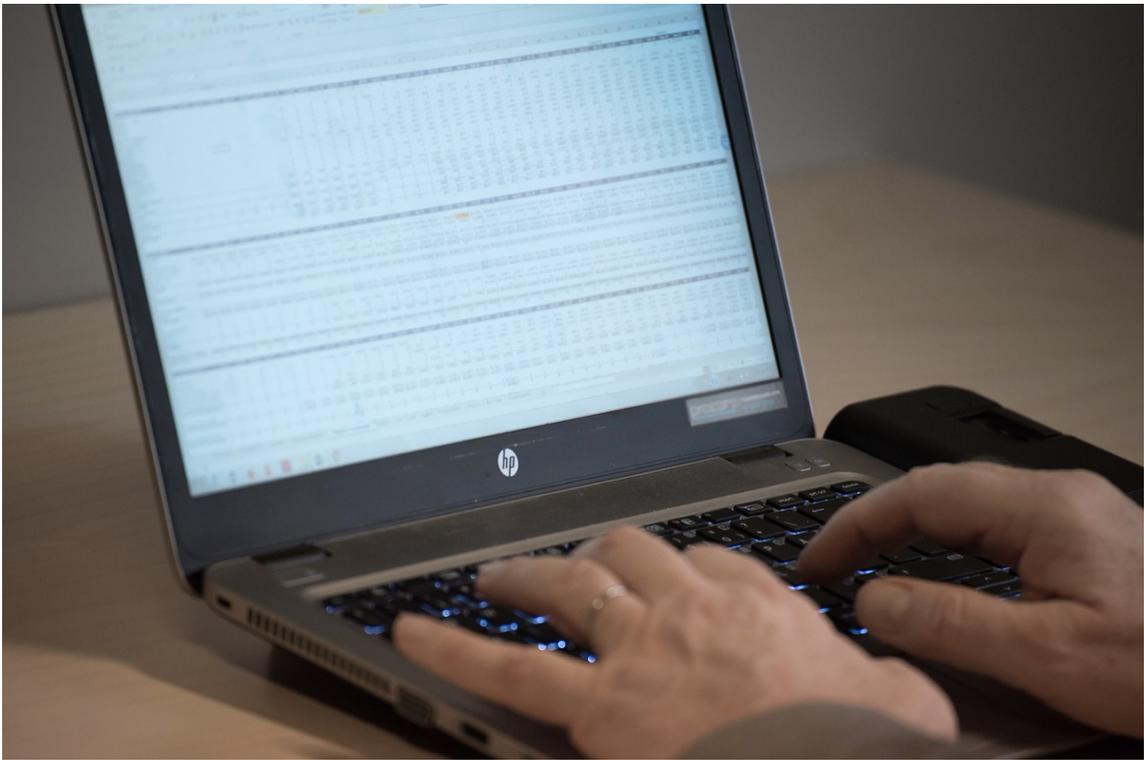
9]b`k Y]hYfYf`k]W`h][Yf`5gdY`_h]gh`X]Y` : fU[Yž`k]Y`XYf`X][]hU`Y`9i fc
]b`VYghY`YbXY`fYW`h]W`Y`F`U`a`YbVYX]b[i b[Yb`]bhY[f]Yfh`k YfXYb
_Ubb`"K`Ä`fYbX`XYf`i`bhYf`gi`W`i`b[gd`UgYž`X]Y`&\$&`%`VY[Ubbž
k i fXY`VYfY]hg`[YdfØZhž`cV`Y`bXYfi`b[Yb`Ua`9I`!FYW`hgfU`a`Yb
bch`k YbX][]g]bXž`i`a`Y]bY`X][]hU`Y` : cfa`j`cb`NYbhfU`VUb`_[Y`X
Y]bni`ZØ`fYb`"8]Yg`VYhf]Zh`i`bhYf`UbXYfYa
8UhYbgW`i`hj`c`fgW`f]ZhYbž`k]Y`g]Y`]b`XYf`8G; J`C`j`YfUb`_Yfh`g]bXž
gck]Y`J`cf[UVYb`ni`f`6Yhfi`[gd`fÄj`Yb]cb`i`bX` :]bUbng]hUV`]h`h`"8]Y
6U`UbW`nk]gW`Yb`XYa`GW`i`h`XYf`Df]j`Uhgd`Ä`fY`i`bX`XYf`

B c h k Y b X] [_ Y] h ž H f U b g U _ h] c b Y b ' b U W X j c ` n] Y \ V U f ' n i ' [Y g h U ` h Y b ž ' k] f X
 \] Y f ' n i ' Y] b Y f ' n Y b h f U ` Y b ' f Y W X h `] W X Y b ' < Y f U i g Z c f X Y f i b [ž ' X] Y '] b ` X Y b
 _ c a a Y b X Y b ' 6 Y f U h i b [Y b ' [Y _ ` Ä f h ' k Y f X Y b ' a i g g "

8] Y ` F c ` ` Y ` X Y g ` 6 U f [Y ` X g ` V ` Y] V h ` Y V Y b Z U ` ` g ` Y] b ` H \ Y a U `] b h Y b g] j Y f
 8] g _ i g g] c b Y b " ` 8 U * \$ i ` ` X Y f ` 6 Y Z f U [h Y b ` k Y] h Y f \] b ` N i [U b [` n i
 d \ m g] g W X Y a ` ; Y ` X ` k Ø b g W X Y b ž ` \ U h ` X] Y ` 9 i f c d Ä] g W X Y ` ? c a a] g g] c b
 j c f [Y g W X ` U [Y b ž ` X Y g g Y b ` 5 _ n Y d h U b n ` [Y g Y h n `] W X ` n i ` g] W X Y f b " ` 8] Y g ` g c ` `
 g] W X Y f g h Y ` ` Y b ž ` X U g g ` X Y f ` X] [] h U ` Y ` 9 i f c ` b] W X h ` U ` g ` 9 f g U h n ž ` g c b X Y f b ` U ` g
 9 f [Ä b n i b [` k U \ f [Y b c a a Y b ` k] f X ` ` Y] b ` D i b _ h ž ` X Y f ` U i W X ` d c `] h] g W X
 g Y b g] V Y ` `] g h ž ` X U ` Y] b [] Y ` A] h [`] Y X g h U U h Y b ` k] Y ` X] Y ` G ` c k U _ Y] ` V Y f Y] h g
 X U g ` F Y W X h ` U i Z ` 6 U f [Y ` X n U \ ` i b [Y b `] b `] \ f Y f ` J Y f Z U g g i b [` j Y f U b _ Y f h
 \ U V Y b " ` G c ` W X Y ` b U h] c b U ` Y b ` i b h Y f g W X] Y X Y ` _ Ø b b h Y b ` X] Y
 < U f a c b] g] Y f i b [` X Y f ` f Y W X h `] W X Y b ` F U \ a Y b V Y X] b [i b [Y b
 Y f g W X k Y f Y b ` i b X ` X Y b ` 9] b Z Ø \ f i b [g d f c n Y g g ` j Y f n Ø [Y f b "

G W X `] Y » `] W X ` g d] Y ` h ` X Y f ` 5 i g h U i g W X ` a] h ` X Y f ` 2 Z Z Y b h `] W X _ Y] h i b X
 ð h Y f Y g g Y b g [f i d d Y b ` Y] b Y ` k] W X h [Y ` F c ` ` Y `] b ` X Y f ` f Y [i ` U h c f] g W X Y b
 ; Y g h U ` h i b [" ` 8] Y ` 9 N 6 ` d ` U b h ž ` k Ä \ f Y b X ` X Y f ` J c f V Y f Y] h i b [g d \ U g Y
 U _ h j ` : Y Y X V U W _ ` Y] b n i \ c ` Y b ž ` i a ` g] W X Y f n i g h Y ` ` Y b ž ` X U g g ` X Y f ` X] [] h U ` Y
 9 i f c ` b] W X h ` b i f ` h Y W X b] g W X ` i b X ` f Y W X h `] W X ` a U W X V U f ž ` g c b X Y f b ` U i W X
 [Y g Y ` ` g W X U Z h `] W X ` U _ n Y d h] Y f h] g h " K] Y ` g] W X ` X] Y g Y ` F Ø W _ a Y ` X i b [Y b
 U i Z X] Y ` ; Y g Y h n [Y V i b [` U i g k] f _ Y b ` i b X ` c V ` g] Y ` n i ` k Y] h Y f Y b
 5 b d U g g i b [Y b ` Z Ø \ f Y b ž ` k] f X ` Y] b ` Y b h g W X Y] X Y b X Y f ` : U _ h c f ` Z Ø f ` X Y b
 k Y] h Y f Y b ` J Y f ` U i Z ` X Y g ` D f c ` Y _ h g ` g Y] b "

Ni _ i b ZhgUi gV `] W _



6`jW_Yb`k]f`b`X]Y`?f]ghU``_i [Y``XYf`:]bUbnk Y`hž`i a `X]Y`a Ò[`]W]Yb
DZUXY`XYg`X][]hU`Yb`9i fcg`]b`XYb`_ca a YbXYb`đ\FYb`ni `YFU\`bYbž
i bX`k U[Yb`Y]bY`Dfc[bcgY`ØVYf`X]Y`9bhk]W`_i b[Ybž`X]Y`9i fcdUg
NU\`i b[g`UbXgW]UZh`dFÀ[Yb`_ØbbhYb`"K À\FYbX`X]Y`9i fcdÀ]gW]Y
NYbhFU`VUb`_f9N6Ě`a]h`<cW]Xfi W`_Ub`X]YgYa `Dfc`Y`_h`UfVY]hYhž
V`Y]Vh`X]Y`Ni _i bZhj`cb`l`bg]W]Yf\`Y]hYb`i bX`DchYbn]U`Yb
Xi fW]nc[Yb`"J`cb`hYW]bc`c[]gW]Yb`:]cfhgW]f]hhYb`ØVYf`dc`]h]gW]Y
9bhgW]Y]Xi b[Yb`V]g`\]b`ni f`[YgY``gW]UZh]W]Yb`5`_nYdhUbn`X]Y
bÀW]ghYb`đ\FY`k YfXYb`YbhgW]Y]XYbX`gY]bž`i a `ni`gY\`Ybž`cV`i bX
k]Y`XYf`X][]hU`Y`9i fc`gY]bYb`D`Uhn`]a `5``hU[`XYf`A YbgW]Yb`Z]bXYh`

8Yf`U`_hi Y``Y`NY]hd`Ub`XYf`9N6`g]Y\`hj`cfž`XUgg`X]Y
J`cfVYfY]hi b[gd\UgYž`X]Y`9bXY`&\$&&`VY[Ubbž`V]g`<YfVgh`&\$&)
UbXUi Yfh`"đ`X]YgYf`NY]hk YfXYb`j`YfgW]YXYbY`HYW]bc`c[]Yb`k]Y
6`cW`W]U]b`i bX`Hc`_Yb]g]Yfi b[[YhYghYhž`i a `Y]bY`fcVi ghY
đZfUghfi _hi f`ni`gW]UZZYbž`X]Y`gck`c`\`cb`]bY`U`g`Ui W]`cZZ]bY
NU\`i b[Yb`Yfa Ò[`]W]h`"DUfU``Y`XUni`k]fX`ØVYf`Y]b`<U`hY`]a]h`ZØf
X][]hU`Y`9i fc`!;`i`h\UVYb`X]g`_i`h]Yfhž`XUg`nk]gW]Yb`) \$\$`i`bX`" "\$\$\$
9i fc``]Y[Yb`_ØbbhYž`i a `6Ub`_YbUVZØggY`ni`j`Yf\]bXYfb`"9]b
gc[YbUbbhYg`K`UggYfZU``gmghYa`ž`XUg`NU\`i b[Yb`ØVYf`XUg
6Ub`__cbhc`\]bUi`g`Yf`Ui`Vhž]gh`YVYbZU``g`]b`9bhk]W`_i b[ž`k]Y`Ui`Z
XYf`K`YVgY]hY`XYf`8Yi`hgW]Yb`6i`bXYgVUb`_Yf`Ài`hYfh`k]fX`
8]YgY`hYW]b]gW]Yb`i bX`_cbnYdh]cbY``Yb`GW]f]hhY`XYi`hYb`XUfUi`Z

\]bž'XUgg'V]g'9bXY'&\$&) 'YfghY' _cb_fYhY'9bhgWXY]Xi b[Yb'ØVYf'X]Y
9]bZØ\fi b['[YhfcZZYb'k YfXYb' _ØbbhYb"

9]bY'a Ø[']WXY'9]bZØ\fi b['XYg'X][[hU'Yb'9i fcg'k]fX'YXcW' b]WKh
j cf'XYf'nk Y]hYb' < À'ZhY'X]YgYg' ð\fnY\bhg'Yfk UfhYhž'k cVY]Y]b][Y
9i dYfhYb'Ui Z&\$&- 'U'g'fYU']gh]gWXYg'N]Y''\]bk Y]gYb"'8]YgY
J YfnØ[Yfi b['\Àb[h' b]WKh'bi f'a]h'hYW' b]gWXYb
< YfUi gZcfXYfi b[Yb'ni gUa a Ybž'gcbXYfb'Ui W' a]h'XYf
Bchk YbX][_Y]hž'Y]bY [YgYh']WXY' ; fi bX'U[Y'ni 'gW'UZZYb"'8]Y
9i fcdÀ]gWXY' ?ca a]gg]cb '\Uh'VYfY]hg'Y]bYb' ; YgYh'YgYb'k i fZ
j cf[Y'Y[hž'XYf']b'XYf'nk Y]hYb' < À'ZhY'&\$&) 'VYgW'cggYb'k YfXYb
_ØbbhY"'Gc''hY'X]Yg[Y']b[Ybž'k ØfXY'XYf'X][[hU'Y'9i fc'U'g'X][[hU'Y
: cfa 'j cb'NYbh'f'U'VUb_[Y'X'gW'f]h'k Y]gY']b'XYb'NU'\ 'i b[gj Yf_Y\ f
]bhY[f]Yfh'k YfXYbž'k cVY] ; fi bXZi b_h]cbYb'ZØf'9bXj YfVfUi WXYf
[YVØ\ fYbZfY]'V'Y]VYb'gc''Ybž'i a 'Y]bY'VfY]hY'5_nYdhUb'ni
ZØfXYfb"

9]b'nYbh'f'U'Yf'5gdY_h'XYf'ni _ØbZh][Yb'9bhk]W' i b['k]fX'X]Y
6U'UbW'nk]gWXYb'6Uf[Y'X'i bX'X][[hU'Yb'NU'\ 'i b[ga]hY'b'gY]b"
Hfchn'Y]bYg'FØW_[Ub[g'XYf'6UfnU'\ 'i b[Yb']b'8Yi hgW'UbX'j cb
+%i 'ja 'ð\ f'&\$%+'Ui Z) %i 'ja 'ð\ f'&\$&('V'Y]Vh'6Uf[Y'X'Y]b
k]WKh][Yg'NU'\ 'i b[ga]hY'ž'k]Y'8]g_i gg]cbYb'VY]Y]bYf
J YfUbghU'hi b['XYf'6i bXYgVUb_']b'7\Ya b]h'&\$&) 'nY][Ybž'X]Y'Ui Z
HU[YggW'Ui "XY'VYf]W'hY'h'k YfXYb"'8]Y'6i bXYgVUb_'gYh'h'g]W
ZØf'K U\ZfY]\Y]h'VY]a '6YnU'\Yb'Y]bž'i bX'XYf'X][[hU'Y'9i fc'k]fX
U'g'9f[Àbni b[ž'b]WKh'U'g'9fgUhn'dcg]h]cb]Yfh" ; 'Y]W'nY]h]['d'Ub'h'X]Y
9N6'X]Y'9]bZØ\fi b['Y]bYf'bYi Yb'9i fc!6Ub_bchYbgYf]Y'ZØf'&\$&- ž
k Ug'i bhYfghfY]W'hž'XUgg'd\mg]gWXYg ; Y'X'k Y]hYf\]b'Y]bY'F c''Y
gd]Y'Yb'k]fX"

Dc`h]gW' [YgY\Yb' [Yb]Y» h'XYf'X][[hU'Y'9i fc'l bhYfghØhni b['j cb
XYf'5a dY'!F Y[]Yfi b['i bX'XYf'78I #7GI ž'k À\ fYbX'DUfhY]Yb'k]Y
X]Y'5Z8'XU[Y[Yb'ghY\Yb"'8]YgY'dc`h]gWXY'8mbUa]_ _ØbbhY'X]Y
; YgW'k]bX][_Y]h'i bX'5i g[YghU'hi b['XYf'9]bZØ\fi b['VYY]bZi ggYbž
]bgVYgcbXYfY'k Ybb'Yg'i a 'gYbg]V'Y'H\Ya Yb'k]Y'8UhYbgW' i hn
[Y\h"'8]Y'9N6'VYhcbhž'XUgg'XYf'X][[hU'Y'9i fc'Y]b'\c\Yg'A U» 'Ub
Df]j Uhgd\ĀfY'V]YhYb'gc''ž'c\bY'X]Y' ðYb'h]hĀ'h'XYf'Bi hnYf
bUW'j YfZc'[VUf'ni 'a UWXYb' 'Y]b'J YfgdfYWXYbž'XYggYb

I a gYhni b['YbhgWXY]XYbX'ZØf'X]Y'ÖZZYbh]WXY'5_nYdhUbn'gY]b'k]fX"
; 'Y]WXYnY]h]['_ÖbbhY'XYf': c_i g'Ui ZYi fcdÀ]gWXY'Gci j YfÀb]hÀhž
Xi fW'X]Y'FYXi _h]cb'XYf'5V\Àb[][_Y]hj cb']bhYfbUh]cbU'Yb
NU\`i b[gX]Ybgh'Y]ghYfbž'X]Y'dc`h]gWXY'i bhYfghØhni b['k Y]hYf
ghÀf_Yb"

5i Z[`cVU'Yf'9VYbY'ghY\h'XYf'X][]hU'Y'9i fc'ja '?cbhYI hij cb'ØVYf
%' \$'Dfc_Y_hYb'ni f'8][]hU'g]Yfi b['j cb'K À\fi b[Ybž'k cVY]'7\]bU
a]h'XYa 'X][]hU'Yb'M Ub'U'g'J cffY]hYf'[]h'8]YgYf']bhYfbUh]cbU'Y
K YhhVYk YfV'_ÖbbhY'XYb'8fi W_Ui Z'9i fcdU'Yf\Ö\Ybž'X]Y
9]bZØ\fi b['ni 'VYgW'Yi b][Ybž'i a 'k]fhgW'UZh]W'Yi bX
hYW'bc`c[]gW'`b]W'h'ni fØW_ni ZU''Yb"; 'Y]WXYnY]h]['_ÖbbhYb
9fZU\fi b[Yb'Ui g'UbXYfYb'@ÀbXYfbž'k]Y'Yhk U'hYW'b]gWXY
@Øgi b[Yb'cXYf'5bgÀhY'ni f'Bi hnYfU_nYdhUbnž]b'X]Y'9bhk]W'`i b[
Y]bZ]Y»Yb'i bX'XYb'X][]hU'Yb'9i fc'fcVi ghYf'a UWXYb"

⇒ '9]bnY'\UbXY''i bX'VY]'J YfVfUi WXYfb'k]fX'X]Y'9]bZØ\fi b[
YVYbZU`g'Ui Z`hYfYggY'ghc»Ybž'UVYf'Ui W'Ui Z'G_Ydg]g" < ÀbX'Yfž
k]Y'Xi fW'5b_Y'?fUi gY'j ca ' < UbXY'gj YfVUbX'GUW'gYb'j YfhfYhYbž
ZcfXYfb'Y]bYb'_cghYbbYi hfU'Yb'X][]hU'Yb'9i fcž'XU'X]Y'ghY][YbXYb
'?cghYb'ZØf'?UfhYbnU\`i b[Yb'Y]bY'6Y'Ughi b['XUfghY''Yb"
J YfVfUi WXYf'k]YXYfi a 'ghY''Yb': fU[Yb'ni 'dfU_h]gWXYb'5V`Ài ZYbž
G]WXYf\Y]h'i bX'`ZUh]cbž'k Ug'nY][hž'XUgg'hfUbgdUfYbhY
'?ca a i b]_Uh]cb'i bX'5i Z_`Àfi b['j]b'XYb'_ca a YbXYb'`X\Yb
YbhgWXY]XYbX'gY]b'k YfXYbž'i a 'J YfhfUi Yb'Ui Zni VUi Yb"

2 ZZYbh]WXY'5_nYdhUbn



9f[f0bXYb`k]fž`k Ug`j]b`XYb`? 0dZYb`XYf`A YbgWXYb`j cf[Y\hž`k Ybb
g]Y`Ub`XYb`X][]hU`Yb`9i fc`XYb`_Ybž`i bX`hUi WXYb`]b`X]Y`j]Y`ZÀ`h][Yb
; YZ0`Y`i bX`5bg]WXYb`Y]bž`X]Y`X]YgY` ðbcj Uh]cb`VY]`XYf
6Yj 0`_Yfi b[`Yfj cffi Zh`K À`fYb`X`X]Y`9i fcdÀ]gWXY`NYbhfU`VUb`
f9N6Ł`i bX`dc`]h]gWXY`9bhgWXY]Xi b[ghfÀ[Yf`X]Y`9]bZ0`fi b[`Y]bYf
X][]hU`Yb`K À`fi b[`j cfUbhfY]VYbž`\Àb[h`XYf`9fZc`[`a U» [YV`]W
XUj cb`UVž`cV`i bX`k]Y`X]Y`60f[Yf]bbYb`i bX`60f[Yf`g]Y
UbbY`a Yb``8]Y`A Y]bi b[Yb`g]bX`[YgdU`hYbž`[YdfÀ[h]`cb`BYi []Yfž
G`Ydg]g`i bX`dfU`h]gWXYb`, VYf`Y[i b[Ybž`X]Y`h]YZ]b`XYb`5`hU[`i bX
X]Y`K YfhY`XYf`A YbgWXYb`Y]b[fY]ZYb`"

9]bY`[fi bX`Y[YbXY`6YcVUW`hi b[`]ghž`XUgg`X]Y`6Y`_Ubbh`Y]h`XYg
X][]hU`Yb`9i fcg`]b`XYf`6Yj 0`_Yfi b[`bcW`VY[fYbni`]gh`l a ZfU[Yb
nY][Ybž`XUgg`bi f`Yhk U`(% `XYf`9i fcdÀYf`0VYf`U`i dh]`cb`XYa
Dfc`Y`h[Y\0fh`\UVYbž`k À`fYb`X`) - i `Y]bY`?Ybbhb]g`XUj cb
VYg]hnYb``8]YgY`NU`Yb`XYi hYb`XUfUi Z`\]bž`XUgg`Y]b`Yf`YV`]WXYf
HY]`XYf`2 ZYbh]W`_Y]h`bcW`b]W`h`Ui gfY]WXYb`X`]bZcfa]Yfh`]ghž`i a
Y]bY`Zi bX]YfhY`A Y]bi b[`ni`V`]XYb``8YbbcW`[]Vh`Yg`i bhYf`XYb
ðZcfa]YfhYb`Y]bY`VfY]hY`DU`YhY`Ub`9]bghY``i b[Ybž`X]Y`j cb
j cfg]W`h][Yf`Ni gh]a a i b[`V]g`\]b`ni`XYi h]WXYf`5V`Y`bi b[
fY]WXYbž`k]Y`Ui W`8]g`_i gg]cbYb`]b`0ZZYbh]WXYb`: cfYb`i bX
J YfUbghU`hi b[Yb`j YfXYi h]WXYb`"

J]Y`Y`A YbgWXYb`gY`Yb`]a`X][]hU`Yb`9i fc`Y]bY`7`UbW`ž`XYb
NU`i b[gj Yf`_Y`f`a cXYfbYf`i bX`YZ]n]YbhYf`ni`[YghU`hYb`"

6YgcbXYfg'Øb[YfY'; YbYfUh]cbYbž'X]Y'a]h'X][]hU`Yb`HYW\bc`c[]Yb
Ui Z[Yk UW\gYb'g]bXž'nY][Yb'g]W\`cZZYb`ZØf`Y]bY`K`À\fi b[ž'X]Y
bU\h`cg`]b`5ddg`i bX`C b`]bY!D`UhhZcfa` Yb`]bhY[f]Yfh`k YfXYb
_ØbbhY""8]Y`5i`gg]W\h`Ui`Z`gW\`bY`YfY`HfUbgU_h]cbYb`i bX`[Yf]b[YfY
?cghYbž`k]Y`g]Y`j`cb`XYf`9N6`j`YfgdfcW\Yb`k`YfXYbž`k]fX`d`cg[h]j
k U\`f[Ybca`a`Yb`"Ni`XYa`gW\`ÀhYb`Y]b][Y`X]Y`A`Ò[`]W\`_Y]hž
i bUV\`Àb[]][Yf`j`cb`]bhYfbUh]cbU`Yb`NU\`i b[gX]Ybgh`Y]ghYfb`k]Y
J]gU`cXYf`A`UghYfWUfX`ni`k`YfXYbž`Y]b`Di`b`_hž`XYf`Ui`W\`Ui`Z`
:]bUb`nh]d` \Yfj`cf[Y\`cVYb`k]fXž`k`c`X]Y`Gh`Àf`_i b[`XYf
Yi`fcd`À]gW\Yb`Gci`j`Yf`Àb]h`Àh`U`g`J`cfhY]`VYh`cb`h`k]fX`"

; `Y]W\`nY]h][` []Vh`Yg`Y`XcW\`Yf\`YV`]W\`Y`6YXYb`_Ybž`X]Y`j`cf`U`Y`a
i`a`'8`UhYbgW\`i`hn`i`bX`G]W\`Yf\`Y]h`_fY]gYb`"J]Y`Y`6Øf[Yf]bbYb`i`bX
6Øf[Yf`VY`ZØfW\`hYbž`XUgg`Y]bY`X][]hU`Y`K`À\fi b[ž'X]Y`j`cb`XYf
NYbhfU`VUb`_`_cb`hfc`Y]Yfh`k]fXž`ni`Y]bYf`j`Yfgh`Àf`_hYb` ,`VYfk`UW\`i`b[
ZØ\`fYb`_ØbbhY""8]Y`Gcf[Yž`XUgg`dYfgØb`]W\`Y` :]bUb`nX`UhYb
bUW\`j`YfZc`[VUf`k`YfXYb`c`XYf`]b`ZU`gW\`Y`<`Àb`XY`[YfUhYbž`]gh`k`Y]h
j`YfVfY]hYhž`]bgVYgcbXYfY`]b`@`Àb`XYfb`a`]h`Y]bYf`ghUf`_Yb`HfUX]h]cb
XYg`6Uf[Y`X[YVfUi`W\`g`k]Y`8Yi`hgW\`UbX""2`ZZYbh]W\`Y
8]g`_i`gg]cbYbž`Yhk`U`VY]Y]bYf`J`YfUbghU`hi`b[`XYf`6i`bXYgVUb`_`]b
7\`Ya`b]hn`&\$&) ž'nY][Ybž`XUgg` : fU[Yb`ni`f`G]W\`Yf\`Y]hi`bX`ni`a
GW\`i`hn`XYf`Df]j`Uhgd`\`ÀfY`]a`A`]hY`di`b`_h`XYf`6YXYb`_Yb`gh`Y\`Yb`"

9]b`k`Y]hYfYf`5gdY`_hž`XYf`X]Y`9]bghY`i`b[Yb`df`À[hž`]gh`X]Y
Ya`ch]cbU`Y`6]bXi`b[`Ub`6Uf[Y`X`" : Øf`j]Y`Y`A`YbgW\`Ybž
]bgVYgcbXYfY`À`hYfY'; YbYfUh]cbYbž`V`Y]Vh`d`\mg]gW\`Yg'; Y`X`Y]b
Gma`Vc`j`cb`?`cb`hfc`Y`i`bX`5bcbma`]h`Àhž`XUg`g]Y`b]W\`h`VYfY]h`g]bX
Ui`Zni`[YVYb`"I`a`ZFU[Yb`XYf`9i`fcd`À]gW\`Yb`?`ca`a`]gg]cb`Yf[UVYbž
XUgg`*`\$i` `XYf`6YZFU[hYb`k`Y]hYf\`]b`Ni`[Ub[`ni`6Uf[Y`X`k`ØbgW\`Ybž
gY`Vgh`k`Ybb`X][]hU`Y`5`hYfbUh]j`Yb`j`YfZØ[VUf`k`YfXYb`"8]YgY
Df`ÀZYfYbn`gd]Y[Y`h`g]W\`Ui`W\`]b`XYf`\`c`\Yb`HY]`bU\`a`Y`Ub
J`YfUbghU`hi`b[Yb`k`]XYfž`VY]`XYbYb`6Uf[Y`X`c`XYf'; YXYb`_a`ØbnYb
Ui`g[Y[YVYb`k`YfXYbž`k`Ug`X]Y`Ub`\`U`hYbXY`6Y`]YVh\`Y]h`j`cb
d`\mg]gW\`Ya` ; Y`X`i`bhYfghfY]W\`h`"

⇒ 9]bnY`\UbXY`i`bX`i`bhYf`J`YfVfUi`W\`Yfb`i` []Vh`Yg`YVYbZU`g
[Ya`]gW\`hY'; YZØ`\`Y`" <`Àb`X`Yf`gY\`Yb`DchYbn]U`i`]b`Y]bYa
_cghYbbYi`hfU`Yb`X][]hU`Yb`9i`fcž`XYf`X]Y`\`c`\Yb`; YVØ\`fYb`ZØf`

? UfhYbnU\`i b[Yb`i a [Y\Yb`_ÖbbhYž`g]bX`UVYf`g_Ydh]gWł`ž`cV`X]Y
5_nYdhUbn`i bX`ϕZfUghfi _hi f`fYWł`hnY]h[`VYfY]h[YghY`h`k YfXYb"
J YfVfUi Wł`Yf`\]b[Y[Yb`Äi » Yfb`dfU_h]gWł`Y` : fU[Yb`ni `ϕZUh]cbž
6Ybi hnYfZfYi bX`]Wł`_Y]h`i bX`XYf`J YfZØ[VUf`_Y]h]b`ÄbX`]Wł`Yb
; YV]YhYb`"8]YgY`dfU[a Uh]gWł`Yb` , VYf`Y[i b[Yb`nY][Ybž`XUgg`X]Y
9]bZØ\fi b[`b]Wł`h`bi f`hYWł`b]gWł`ž`gcbXYfb`Ui Wł`_ca a i b]_Uh]j
Y]bY`<YfUi gZcfXYfi b[`XUfghY`hž`i a `Y`b[ghY`ni `nYfghfYi Yb`i bX
J YfhfUi Yb`Ui Zni VUi Yb"

Dc`h]gWł`Y`i bX`_i `hi fY`Y`i bhYfgWł`]YXY`]bbYf\U`V`9i fcdUg
VYY]bZi ggYb`ni XYa `X]Y`K U\fbY\ a i b["`K Ä\fybX`]b`Y]b][Yb
@ÄbXYfb`k]Y`XYb`B]YXYf`UbXYb`cXYf`g_UbX]bUj]gWł`Yb`GhUUhYb
X][]hU`Y`NU\`i b[Yb`VYfY]hg`k Y]h`j YfVfY]hYh`g]bX`i bX`XYf`X][]hU`Y
9i fc`U`g`c[]gWł`Yf`GWł`f]h`i[YgY\Yb`k]fXž`\YffgWł`h`i]b`UbXYfYb
FY[]cbYbž`k c`6Uf[Y`X`Y]bY`ghÄf`_YfY`_i `hi fY`Y`6YXYi hi b[`U`hž
a Y\f`Ni fØW_\U`hi b["`8]YgY`J]Y`ZU`h`Ub`9]bghY`i b[Yb`a UWł`h
XYi h]Wł`ž`XUgg`X]Y`9N6`j cf`XYf`5i Z[UVY`ghY`hž`b]Wł`h`bi f`Y]bY
Y]b\Y]h]Wł`Y`K Ä\fi b[ž`gcbXYfb`Ui Wł`Y]bY`Y]b\Y]h]Wł`Y
?ca a i b]_Uh]cbggghfUhY[]Y`ni `Ybhk]Wł`Y`bž`X]Y`Ui ZX]Y
i bhYfgWł`]YX`]Wł`Yb`6YXØfZb]ggY`i bX`Gcf[Yb`XYf`6Yj Ö`_Yfi b[
Y]b[Y`h"

GWł`i ggZc`[Yfi b[



GWUi Yb`k]f`ni fØW`Ui ZX]Y`ZUW`hYb`fY]W`Y`F`Y]gY`Xi fW`X]Y`K`Y`h`
XYg`X][]hU`Yb`9i fcg`i bX`ZUggYb`X]Y`nYbhfU`Yb`9f`_Ybbhb]ggY
ni gUa`a`Ybž`k`À`fYb`X`k`]f`Y]bYb`dYfgØb`]W`Yb`6`]W`_`Ui`ZX]Y`
a`Ö[`]W`Yb`_ØbZh][Yb`9b`hk`]W`_`i`b[Yb`k`YfZYb``8]YgYg`Dfc`Y`_h`XYf`
9i fcdÀ]gW`Yb`NYbhfU`VUb`_`fØN6Łž`XUg`gY]h`ž``]`&\$&%`;`YghU`h`
Ubb]a`a`hž`U`h`XUg`DchYbn]U`ž`XYb`NU`_`i`b[gj`Yf`_Y`f`]b`XYf`
9i fcncbY`ni`fYj`c`i`h]cb]YfYb``9g`j`Yfgdf]W`h`Y]bY`gW`bY`YfYž`
g]W`YfYfY`i`bX`_cg`hYb[Øbgh][YfY`5`hYfbUh]j`Y`ni`VYghY`YbXYb`
GmghY`a`Ybž`V]f[h`Y`XcW`_`Ui`W`<`YfUi`gZc`fXYfi`b[Ybž`X]Y`j`cb`
8UhYbgW`i`h`ØVYf`Z]bUbn]Y`Y`GhUV]`]h`h`V]g`_`]b`ni`f`
[YgY`gW`UZh]W`Yb`5`_nYdhUbn`fY]W`Yb``8]Y`8]g`_i`gg]cbYb`i`bX`
5bU`mgYb`nY][Yb`Y]b`6]`X`j`c`Yf`7`U`bW`bž`UVYf`_`Ui`W`_g][b]Z]_Ub`hYf`
<ØfXYbž`X]Y`Yg`ni`ØVYfk]bXYb`[]`h`

Ni`XYb`[fØ»`hYb`Gh`f`_Yb`XYg`X][]hU`Yb`9i fcg`n`À`h`X]Y`
A`Ö[`]W`_Y]hž`X]Y`a`cbYh`fY`Gci`j`Yf`Ab]h`h`9i fcdUg`ni`gh`f`_Yb`i`bX`
X]Y`5V`Àb[][_Y]h]j`cb`]bhYfbUh]cbU`Yb`NU`_`i`b[gX]YbghY]ghYfb`k`]Y`
J]gU`cXYf`A`UghYfWUfX`ni`fYXi`n]YfYb``8i`fW`X]Y`5i`g[UVY`X]fY`_h`
j`cb`XYb`NYbhfU`VUb`_Yb`XYg`9i fcfUi`a`g`_ØbbhY`Yf`U`g`ghUV]`Ygž`
f]g[_cZfY]Yg`NU`_`i`b[ga`]hhY`Zi`b[]YfYbž`XUg`J`YfhfUi`Yb`]b`X][]hU`Y`
HfUbgU`_h]cbYb`ZØfXYfh``Ni`XYa`_V]YhYh`Yf`DchYbn]U`ZØf`Z]bUbn]Y`Y`
_`_i`g]cbž]bXYa`_Yf`A`YbgW`Yb`c`_bY`Ni`[Ub[]ni`hfUX]h]cbY`Yb`
6Ub`_X]YbghYb`Y]bVYn]Y`hž`i`bX`_ØbbhY`_`bcj`Uh]cbYb`]a`

9]bnY`UbXY`gck]Y`VY]]bhYfbUh]cbU`Yb`NU\`i b[Yb`j cfUbfhY]VYbž
k]Y`Ui ZXYf`K]_]dYX]U!GY]hY`ni a `X][]hU`Yb`9i fc`XYhU]`Yfh
VYgWf]YVYb`k]fX"

5i ZXYf`UbXYfYb`GY]hY`ghY`Yb`Yf`YV`]WXY`6YXYb`Ybž`X]Y`b]WKh
i bhYfgW`Àmh`k YfXYb`XØfZYb" `8 UhYbgW`i hn`i bX`G]WXYf`Y]h`g]bX
nYbhfU`Y`5b`]Y[Ybž`XU`X]Y`B UW]j YfZc`[VUf`_Y]h`X][]hU`Yf
HfUbgU`_h]cbYb`X]Y`Df]j Uhg`d`ÀfY`[YZ`À`fXYb`_ØbbhY" `F]g]_Yb`k]Y
7mVYfU`b[f]ZY`i bX`X]Y`dchYbn]Y`Y`8YghUV]`]g]Yfi b[`XYg
6Ub`_Ybgmg`hYa`g`Xi fW`9]b`U[YbUVZØggY`ghY`Yb`k Y]hYfY`< ØfXYb
XUf" `8]Y`ÒZYbh]WXY`5`_nYdhUbn]`ghYVYbZU`g`ZfU[`]Wž`XU`j]Y`Y
6Øf[Yf]bbYb`i bX`6Øf[Yf`6Uf[Y`X`U`g`i bj Yfn]W`hVUf`UbgY`Yb`i bX
g`_Ydh]gW`[Y[YbØVYf`ghUUh]WXYf`? c b`hfc`Y`g]bX" `8]YgY
GdUbbi b[gZY`XYf`j YfXYi`h]WXYbž`XUgg`XYf`X][]hU`Y`9i fc`b]W`h`bi`f
Y]bY`hYW`b]gWXYž`gcbXYfb`Ui W`Y]bY`[YgY`gW`UZh]WXY`i bX
dc`]h]gWXY`< YfUi`gZcfXYfi b[`]gh"

9i dYfhYba Y]bi b[Ybž`k]Y`g]Y`Ui ZXYf`965XUm`&\$&) `X]g`_i h]Yfh
k i fXYbž`i bhYfghfY]WXYb`XUg`hfUbgZcfa`Uh]j Y`DchYbn]U`ž`UVYf`Ui W`X
X]Y`B`chk YbX][]_Y]h`Y]bYf`Yb[Yb`Ni`gUa`a`YbUfVY]h`nk]gWXYb
ÒZYbh]WXYb`i bX`df]j UhYb`5`_hYi`fYb" `@Ui`h`6Yf]W`hYb`j`cb`:
]bYI`hfU`
VYhcbhYb`GdfYWXYf`k]Y`B]`g`6Y]Yf`j`cb`5W`W`bhi`fY`X]Y`6YXYi`hi`b[
XYg`X][]hU`Yb`9i`fc`g`ZØf`X][]hU`Y`J`Yfa`Ò[Yb`gk`YfhY`i`bX
]bhYfbUh]cbU`Y`NU\`i`b[Ybž`k`À`fYbX`8Ub]Y`A`W@YUb`j`cb`XYf`9N6
X]Y`gWf]h`rk`Y]gY`9b`hk`]W`_i`b[`Xi`fW`i`bhYf`gi`W`i`b[`g`i`bX
J`cfVYfY]hi`b[`gd`UgYb`Yf`j`cf`cV" `8]YgY`8]g`_i`gg]cbYb`nY][Ybž
XUgg`XYf`X][]hU`Y`9i`fc`U`g`?`UhU`mgUhc`f`ZØf``b`bcj`Uh]cb`[YgY`Yb
k]fXž`UVYf`bi`f`a`]h`Y]bYf`_`UfYb`GhfUhY[]Y`YfZc`[fY]W`gY]b`_`Ubb"

DYfgØb`]W`VYhfUW`hYhž`U`hY`]W`XYb`X][]hU`Yb`9i`fc`ZØf`Y]bYb
j]Y`j`YfgdFYWXYbXYb`GWf]h]b`F]W`hi`b[`Y]bYf`a`cXYfbYb
:]bUbnk`Y`hž`XYf`YXcW`a`]h`6YXUW`hi`a`[YgYhnh`k`YfXYb`a`i`gg" `8]Y
J`cfhY]`Y`]b`6Yni`[`Ui`Z`9Z]n]Ybn`i`bX`i`bUV`Àb[][_Y]h`g]bX
ØVYfnYi`[YbXž`XcW`X]Y`F]g]_Yb`ZØf`Df]j`Uhg`d`ÀfY`i`bX
:]bUbng`hUV]`]h`À`hYfZcfXYfb`fcVi`ghY`GW`i`hna`YW`Ub]ga`Yb`i`bX
hfUbgdUfYbhY`?`ca`a`i`b]_Uh]cb" `8]Y`[Yd`UbhY`9]bZØ`fi`b[`nk`]gWXYb
&\$&) `i`bX`&\$&,`ž`UV`Àb[][_Y]cb`fYW`h]WXYb`i`bX`hYW`b]gWXYb
: c`fhgWf]h`hYbž`V]YhYh`NY]hž`X]YgY`< YfUi`gZcfXYfi`b[Yb`Ubni`[Y`Ybž`

UVYf`Yg`V`Y]Vh`ZfU[`]Wk`cV`X]Y`9N6`i`bX`X]Y`9I`X]Y`6U`UbW`
nk`]gW`Yb`'bcj`Uh]cb`i`bX`J`YfhfUi`Yb`Z]bXYb`_`ObbYb`"6YgcbXYfg`
X]Y`[`YgY`gW`UZh`]W`Y`5`_nYdhUbn`k`]fX`Yb`hgW`Y]XYbX`gY]b`z`XU`c`bY`
VfY]hY`i`b`hYfgh`Ø`hni`b`[`gY`Vgh`X]Y`VYghY`HYW`bc`c`[`]Y`gW`Y]hYfb`
_`ObbhY`"

8]Y`_ca`a`YbXYb`'j`fY`k`YfXYb`nY][`Yb`z`cV`XYf`X][`]hU`Y`9i`fc`
hUhg`ÅW`]W`X]Y`NU`i`b`[`g`UbXgW`UZh`fYj`c`i`h]cb]YfYb`_`Ubb`cXYf`cV`
Yf`Ui`Z[`fi`bX`j`cb`K`]XYfgh`ÅbXYb`i`bX`i`b`[`Y`ØghYb`DfcV`Ya`Yb`bi`f`
Y]bY`B]gW`Ybfc`Y`Y]bbY`a`Yb`k`]fX`"8]Y`8]g_i`gg]cbYb`i`a`
8UhYbgW`i`hn`z`6Ybi`hnYfZfYi`bX`]W`_Y]hi`bX`X]Y`Fc`Y`XYg`6Uf[`Y`Xg`
a`ØggYb`k`Y]hYf[`YZ`Ø`f`h`k`YfXYb`z`i`a`Y]bY`@Øgi`b`[`ni`Z]bXYb`z`X]Y`
XYb`6YX`ØfZb]ggYb`XYf`A`YbgW`Yb`[`YfYW`h`k`]fX`"8Yf`K`Y`[`]gh`bcW`
`Ub[`z`i`bX`X]Y`F]W`hi`b`[`z`X]Y`9i`fcdU`Y]bgW`Å[`h`z`_`ObbhY`b]W`h`bi`f`
XYb`9i`fcfUi`a`z`gcbXYfb`Ui`W`X`Yb`[`cVU`Yb`:]bUbna`Uf`_h`
bUW`U`h][`V`Y`Y]bZi`ggYb`"

E i Y`Yb

- \ hhd g. ##Yb"k`_]dYX]U"c f[#k`_]#8][`]hU`SYi`fc`
- \ hhd g. ##k`k`k`"Z]bYI`hfU"W`c`a`#bYk`gUfh]WY#(`*`\$(`+`#YVUX`
Um!&\$&)!X][`]hU`!Yi`fc!Ya`Yf[`]b[`]!Ug!U!`
hfUb`gZc`fa`Uh]j`Y!Zc`fW`
- \ hhd g. ##XY"k`_]dYX]U"c f[#k`_]#?`fmd`hc`k`i`7`i`5(`\`fi`b`
[`
- \ hhd g. ##k`k`k`"Z]bUb`nh]d"XY#_fmd`hc`k`UY`\`fi`b`[`Yb`#`
- \ hhd g. ##k`k`k`"V`c`W`_`W`U]b"W`c`a`#k`U`Y`h#UbXfc]X!Udd`
- \ hhd g. ##k`k`k`"Zc`fi`a`!j`Yf`U["W`c`a`#ZUW`k`]ggYb`#XUhYbgW`
\`i`hn!i`bX!]h!g]W`Yf`\`Y]h#X][`]hU`Y!]XYb]hUYh#`
- \ hhd g. ##k`k`k`"Z]bUb`nh]d"XY#X][`]hU`Yf!Yi`fc`#`
- \ hhd g. ##hc`c`_]h!X][`]hU`]g]Yfi`b["XY#X][`]hU`Yf!Yi`fc!]j`cf!`
i`bX!bUW`hY]`Y`#`
- \ hhd g. ##bYhnd`c`]h]_"cf[`#&\$&(`#Jb`c`b`ma`Y!nU`\`i`b`[`Yb!]b`
![`YZU`\`f!ZUW`Y`i`hY!k`UfbYb!]j`cf!f]g]_Yb!XYg!X][`]hU`Yb!`
Yi`fcg`#`

- \ hhd g. ##XY" k]_]dYX]U"c f[#k]_]#8 UhYbgW\ i hn
- \ hhd g. ##k k k "_YmYX"XY#V`c [#k Ug!]gh!XUhYbgW\ i hn#
- \ hhd g. ##Yb"a "k]_]dYX]U"c f[#k]_]#8] []hU`SYi fc
- \ hhd g. ##XY"a "k]_]dYX]U"c f[#k]_]#8] []hU`YfS9i fc
- \ hhd g. ##Z]b UbW`"YW`Yi fc dU`Yi #di V`]WUh]c bg#X] []hU`
Yi fc!dUW_U[YSYb
- \ hhd g. ##k k k "Vi bXYgVUb_"XY#XY#Ui Z[UVYb#h\Ya Yb#
X] []hU`Yf!Yi fc!Yi fc gmghYa !ghUfhYh!X]Y!bUYW\ ghY!
d\ UgY!,) * %) ,
- \ hhd g. ##k k k "Vi bXYgVUb_"XY#XY#dfYggY#bhYfj]Yk g#
bi f!) \$\$!Yi fc! [i h\UVYb!Yf`Ui Vh!k Ug!XYf!X] []hU`Y!
Yi fc!Vf]b [Yb!gc`!i bX!k Ug!b]W\ h!- ' ') ' \$
- \ hhd g. ##k k k "hU[YggW\ Ui "XY#b`UbX#Y []c bU`#gUW\ gY
b#a Xf!X] []hU`Yf!Yi fc!cXYf!XYf! [i hY!U`hY!
[Y`XgW\ Y]b!k]Y!nU\`Yb!k]f!]b!ni _i bZh!%\$\$"\ ha `
- \ hhd g. ##Yb" k]_]dYX]U"c f[#k]_]#< U]bYk U`XYSW\ bW`b hf
Uh]c bSWJa d

8YhU]`g

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