

I bZU``]b` < YfhYb. '8 fY]`Dc`n]ghYb`VY] 9]bgUhnZU\ fhYb`j` Yf`Yhnh

⊕`<YfhYb`_Ua`Yg`ni`Y]bYa`I bZU``nk`]gWXYb`Y]bYa`
GhfY]ZYbk U[Yb`i`bX`Y]bYa`D_k`ž`VY]`XYa`j`]Yf`DYfgcbYb`
j`Yf`Yhnh`k`i`fXYb`"

⊕`<YfhYb`_Ua`Yg`ni`Y]bYa`Yfbgh\UZhYb`J`Yf`Y\fgi`bZU``ž`XYf`XfY]
Dc`n]ghYb`i`bX`Y]bY`Ä`hYfY`fUi`j`Yf`YhnhY`"8`Yf`J`cfZU``YfY][`bYhY`
g]Wk`ž`U`g`X]Y`6YUa`hYb`Ui`Z`XYa`K`Y[`ni`Y]bYa`9]bgUhn`k`UfYb`"8`Y]
Dc`nY]`]b`F`YW`_`]b[`\`Ui`gYb`[`UV`VY`_`Ubbhž`XUgg`X]Y`XfY]`&)`>`X\`fY`
U`hYb`Dc`n]ghYb`Xi`fW`X]Y`?`c``g]cb`a`]hY]bYa`D_k`j`Yf`Yhnh`
k`i`fXYb`i`bX`g]Wk`]b`Y]bYa`?`fUb`_`Yb`\`Ui`g`]b`6Y`UbX`i`b[`VYZ]bXYb`"
6Y]`XYa`UbXYfYb`U\fnYi`[`\`UbXY`hY`Yg`g]Wk`i`a`Y]bYb`D_k`ž`]b`
XYa`Y]bY`+`)!`Ä`f][`Y`6Y]ZU`fYf]b`gU»`ž`X]Y`YVYbZU``g`J`Yf`Yhni`b[`Yb`
XUj`cbhfi`["`

6Yf]Wk`hYb`ni`Zc`[`Y`Z0`fhY`XYf`GhfY]ZYbk U[Yb`X]Y`U\fh`a`]h`
Y]b[`YgWk`U`hYhYa`6`Ui`]Wk`hi`bX`A`Ufh]bg`cfb`Xi`fW`"Ni`f`NY]h`XYg`
I`bZU``g`k`c`hY`XYf`U\`fYf`XYg`Dc`nY]ZU`fnYi`[`g`Ub`XYf`I`bZU``ghY``Y`
[`YfUXYUi`g`k`Y]hYfZU`fYbž`[`YbUi`gc`k`]Y`Y]b`+`%!`Ä`f][`Yf`5i`hcZU`fYfž`
XYf`j`cb``]b_g`Ui`Z`X]Y`?`fYi`ni`b[`Ui`Z`Ua`"8`Y]`[`YbUi`Y`I`fgUWk`Y`XYg`
I`bZU``g`]gh`bcWk`i`b`_`Uf`"9]b`k`Y]hYfYf`k`]Wk`h][`Yf`Di`b`_`h`]ghž`XUgg`XYf`
Ä`hYfY`U\`fYfž`XYf`]b`XUg`YgWk`Y`Yb`j`Yfk`]W`Y`h`k`Ufž`b]Wk`h`
j`Yf`Yhnh`k`i`fXY`"

8 YhU]`g`ni`a`I`bZU``\`Yf`[`Ub`[

8Yf`U\`fYf`XYg`GhfY]ZYbk U[Ybg`\Uh`Ub[`Y[`YVYbž`a`]h`Ub[`gUa`Yf`
;`YgWk`]bX][`_Y]h`]b`XYb`?`fYi`ni`b[`gVYfY]Wk`Y]bni`ZU`fYbž`k`Ug`
YVYbZU``g`Xi`fW`5i`[`YbnYi`[`Yb`VYgh`Äh][`h`k`i`fXY`"5b`XYf`?`fYi`ni`b[`
_Ua`Yg`XUbb`ni`XYa`Ni`gUa`a`Ybg`hc»`a`]h`XYa`UbXYfYb`

: U\fnYi ["8]Y`Dc`nY]j Yfa i hYhž`XUgg`X]Y`l a ghÀbXY`XYf
l bZU`a Y`Xi b[`i bX`X]Y`G][bU`]g]Yfi b[`Xi fW`XUg`6`Ui `]W`h`Y]bY
Fc`Y`[Ygd]Y`h`UVYb`_`ÒbbhYb"

B UW`XYa `J cfZU`k i fXY`X]Y`?fYi ni b[`ZØf`a Y`fYfY`Ghi bXYb
[YgdYffhž`i a `X]Y`l bZU`ghY`Y`ni `g]W`Yfb`i bX`X]Y`9fa `]h`i b[Yb
Xi fW`ni ZØ`fYb`"Gc`W`Y`GhfU»YbV`cW`UXYb`_`ÒbbYb`g][b]Z`_UbhY
5i gk]f_`i b[Yb`Ui ZXYb`J Yf`Y`fgZi gg`UVYbž`XU`Yg`g]W`i a `Y]bYb
VY`VhYb`?bchYbdi b`h`U`bXY`h`6YgcbXYfg`]b`XYb`5VYbXghi bXYbž
k Ybb`j]Y`Y`DYbX`Yf`i bhYfk Y[g`g]bXž`_Ubb`XUg`ni `Àb[YfYa
K UfhYb`i bX`i fi ghfUh]cb`ZØ`fYb"

<]bhYf[fØbXY`i bX`F Y`Yj Ub n

8]Y`G]hi Uh]cb`k]fZh`Y]b][Y`i fU[Yb`ØVYf`X]Y`G]W`Yf`Y]h`ja
GhfU»Ybj Yf`Y`f`Ui Zž`VYgcbXYfg`]b`6Yni [`Ui ZXUg`Ni gUa a Ybgd]Y`
nk]gW`Yb`9]bgUhnZU`fnYi [Yb`i bX`XYf`N]j]`VYj Ò`_Yfi b["i bZÀ`Y
k]Y`X]YgYf`j YfXYi h`]W`Yb`X]Y`F]g]_Ybž`XYbYb`9]bgUhn_fÀZhY
Ui g[YgYhnh`g]bXž`k Ybb`g]Y`]b`9]Y`i bhYfk Y[g`g]bX`"8]Y`Dc`nY]`[UV
Ubž`XUgg`]b`gc`W`Yb`G]hi Uh]cbYb`_`ÒW`ghY`J cfG]W`h`[YVchYb`]ghž
]bgVYgcbXYfY`Ub`?fYi ni b[Ybž`X]Y`cZh`j cb`j]Y`Yb`i U\fnYi [Yb
VYZU`fYb`k YfXYb"

Gc`W`Y]b`J cfZU`]gh`b]W`h`bi f`ZØf`X]Y`6YhfcZZYbYb`VY`UghYbXž
gcbXYfb`Ui W`ZØf`U`YbYž`k Y`W`Y`X]Y`BchZU`X]YbghY
i bhYfghØhnYb`»XY`J Yf`Y`hni b[`Y]bYg`Dc`n]ghYb`cXYf`Y]bYf
6Øf[Yf]b`k]f`h`U`g`K YW`fi Z`ZØf`X]Y`i YgYhY`i bX`F]W`h`]b]Ybž`X]Y
XYb`9]bgUhn`j cb`6`Ui `]W`hZU`fnYi [Yb`fY[Y`b"

9]bgUhn_fÀZhY`a ØggYb`g]W`ghYhg`VYk i ggh`gY]bž`XUgg`g]Y`Ui W`ja
9]ZYf`XYg`i YZYW`hg`X]Y`J Yf`Y`fgfY[Y`b`VYZc`[Yb`a ØggYbž`i a `g]W`
i bX`UbXYfY`ni `gW`ØhnYb`"5b[Y`Øf][Y`j cb`9]bgUhnX]YbghYb`k c`Yb
nk Uf`gc`gW`bY`k]Y`a Ò[`]W`Ua `9]bgUhn`c`fh`gY]bž`XcW`]gh`Yg`j cb
YbhgW`Y]XYbXYf`6YXYi hi b[ž`XUgg`XUVY]`X]Y`G]W`Yf`Y]h`U`Yf
J Yf`Y`fghY]`bY`a Yf`ja `5i [Y`VY`U`hYb`k]fX"

8]Y`fY[Y`a À»][Yb`i VYfdfØZ b[Yb`ØVYf`gc`W`Y`J cfZÀ`Y`g]bX
i bYf`Àgg]W`ž`i a `J Yf`Y`fgi bZÀ`Y`nk]gW`Yb`9]bgUhnZU`fnYi [Yb

i bX`N]j `]ZU\fnYi [Yb`ni `a]b]a]YfYb"8]Y`bYi YghY`9bhk]W`i b[
j YfUb`Uggh`X]Y`6Y\`OfXYb`XUni ž`VYgh]a a hY
GWXi `i b[ga U»bU\`a Yb`ni `ØVYfdfØZYb`i bX`[Y[YVYbYbZU`g
Ubni dUggYbž`i a `a Ò[`]WXY; YZU\`fYb`ni `VUbbYb`i bX`Y]b
fY]Vi b[g`cgYg`J cf[Y\`Yb`ZØf`X]Y`Dc`n]ghYb`ni `[Yk`À\`f`Y]ghYb"

⊕`XYf`ÒZZYbh]WXYb`8]g_i gg]cb`k]fX`]a a Yf`\`Ài Z][Yf`X]Y`i: fU[Y
Ui Z[Yk cfZYbž`cV`X]Y`VYghY\`YbXYb`FY[Y`i b[Yb`Ui gfY]WXYbž`i a
X]Y`G]WXYf\`Y]h]a `GhfU»Ybj Yf`_Y\`f`ni `[Yk`À\`f`Y]ghYb"8]Y
DYfgdY`_h]j Y`Y]bYg`Dc`n]ghYb`Ui Z`XYa `K Y[`ni `Y]bYa `9]bgUhnž`XYf
cZi`@YVYb`fYhhYb`a i ggž`i bX`X]Y`DYfgdY`_h]j Y`Y]bYg`bcfa U`Yb
J Yf`_Y\`fghY`bY\`a Yfg`a ØggYb`a]hY]bUbXYf`b`9]b`_Ub[`[YVfUWkh
k YfXYb"

8 YhU]`g`ni a `I bZU``\`Yf[Ub[

8 Yf`I bZU``]b`<YfhYb`YfY][bYhY`g]WXY`Ub`Y]bYf`ghUf`_ZfYei Ybh]YfhYb
?fYi ni b[ž`k Ug`XUfUi Z`\]bXYi hYhž`XUgg`X]Y`J Yf`_Y\`fgg]WXYf\`Y]h]Ub
X]YgYa `GhUbXcfh`a Ò[`]WXYfk Y]gY`cdh]a]Yfh`k YfXYb`_ØbbhY"8]Y
?ca V]bUh]cb`j cb`6`Ui `]WXYh`i bX`A Ufh]bg\`cfb`gc``hY`ZØf`Y]bY
Y]bXYi h][Y`K U\`fbY\`a i b[`XYf`9]bgUhnZU\`fnYi [Y`VY]`XYb`ØVf][Yb
J Yf`_Y\`fghY`bY\`a Yfb`gcf[Yb"9g`ghY`h`g]WXY`X]Y`i: fU[Yž`cV`U`Y
J Yf`_Y\`fghY`bY\`a Yf`X]Y`G][bU`Y`f]WXYh][`]bhYfdfYh]Yfh`cXYf`cV`Yg
a Ò[`]WXYfk Y]gY`5V`Yb_i b[Yb`[UVž`X]Y`ni `XYa `Ni gUa a Ybghc»
ZØ\`fhYb"

I bhYfgi WXYi b[Yb`j cb`J Yf`_Y\`fgi bZÀ``Yb`nY][Yb`\`Ài Z][ž`XUgg`XUg
A]ggj Yfgh`ÀbXb]g]j cb`K Ufbg][bU`Yb`cXYf`Y]bY`5V`Yb_i b[`Xi fW
A cV]`hY`YZcbY`ni `f]h]gWXYb`G]hi Uh]cbYb`ZØ\`fYb`_Ubb"8 U\`Yf
_ØbbhY`Y]bY`K]XYf\`c`i b[`X]YgYf`J cfZÀ``Y`k Yfh] c``Y`9f`_Yb`hb]ggY
ni f`J YfVYggYfi b[`XYf`J Yf`_Y\`fgg]WXYf\`Y]h`VY]hfU[Yb"

F YU`_h]cbYb`j cb`Dc`nY]i bX`² ZZYbh`]WXY`_Y]h

8]Y`Dc`nY]i]b`FYW`_]b[\`Ui gYb`\`Uh`ni f`?`Àfi b[`XYg`I bZU``\`Yf[Ub[g
Y]bY`I bhYfgi WXYi b[`Y]b[`Y`Y]hYh"⊕`XYf`FY[Y`k]fX`VY]`gc`WXYb
J cfZÀ``Yb`Ui WXY`X]Y`² ZZYbh`]WXY`_Y]h]b`i: cfa `j cb`NYi [YbUi Zfi ZYb
Y]b[YVi bXYbž`i a `U`Y`j YfZØ[VUfYb`⊕Zcfa Uh]cbYb`ni `Yf\`U`hYb

i bX`Y]b`j`c`ghAbX][Yg`6]X`ni`gWUZZYb`"Dc`]h]gWY`J`YfhfYhYfi`bX`
X]Y`Òfh]WY`6Yj`Ò`_Yfi`b[`\UVYb`VYfY]hg`Ui`ZX]Y`B`chk`YbX][`_Y]h`
j`cb`G]WYf\Y]hga`U»`bU\`a`Yb`Ub`_f]h]gWYb`?`fYi`ni`b[`Yb`
\]b[`Yk`]YgYb`"8`]Yg`_ÒbbhY`VY]gd]Y`gk`Y]gY`X]Y`ϕghU`U]cb`j`cb`
ni`gÀm`]WYb`J`Yf`_Y\fgnY]WYb`cXYf`5a`dY`Ub`U[`Yb`i`a`ZUggYb`"

8]Y`F`YU`_h]cbYb`Ui`g`XYf`6Yj`Ò`_Yfi`b[`\nY][`Yb`Y]b`ghUf`_Yg`ϕhYfYggY`
Ub`XYf`G]WYf\Y]h`XYf`J`Yf`_Y\fg]bZfUghfi`_hi`f`"ϕ`gc`n]U`Yb`
BYh`nk`Yf`_Yb`[`UV`Yg`VYfY]hg`8`]g`_i`gg]cbYb`ØVYf`À`b`]WY`bY[`Uh]j`Y`
9fZU\fi`b[`Yb`Ub`X]YgYf`?`fYi`ni`b[`ž`k`Ug`Ui`ZY]b`A`i`ghYf`j`cb`
l`bg]WYf\Y]hYb`\]bk`Y]gYb`_ÒbbhY`"

GhUh]gh]_Yb`ni`J`Yf`_Y`f`gi`bZÀ`Y`b`a`]h`
9]bgUhnZU`fnYi`[`Yb`

@Ui`h`6Yf]WY`hYb`XYg`GhUh]gh]gWYb`6i`bXYgUa`hYg`g]bX`
J`Yf`_Y\fgi`bZÀ`Y`a`]h`9]bgUhnZU`fnYi`[`Yb`]b`8Yi`hgW`UbX`Y]bY`
]a`a`Yf`k`]YXYf`_Y\fybXY`<`YfUi`gZc`fXYfi`b[`\`a`i`ϕ\`f`&`\$`&`&`k`i`fXYb`
]b`8Yi`hgW`UbX`Yhk`U`"(``\$`\$`i`bZÀ`Y`a`]h`Dc`]nY]ZU`fnYi`[`Yb`
Xc`_i`a`Ybh]Yfhž`VY]`XYbYb`%`&`\$`\$`DYfgc`bYb`j`Yf`Yhnh`k`i`fXYb`"8`]Y`
9f\YVi`b[`\nY][`hž`XUgg`l`bZÀ`Y`a`]h`Y]b[`YgW`U`hYhYa`6`Ui`]WY`h`
ghUh]gh]gW`\`Ài`Z[`\i`bhYf`À`b`]WYb`l`a`ghÀbXYb`[`YgW`Y`Yb`"C`Zh`
g]bX`X]Y`6YhY]`][`hYb`XUbb`b]WY`h`Ui`gY]WYbX`Ui`Za`Yf`_gUa`c`XYf`
gW`ÀhnYb`X]Y`i`YgW`k`]bX][`_Y]h`XYg`9]bgUhnZU`fnYi`[`g`ZU`gW`Y]b`"

8]YgY`NU`\Yb`i`bhYfa`Ui`Yfb`X]Y`B`chk`YbX][`_Y]h`Y]bYf`VYggYfYb`
5i`Z`_Àfi`b[`\XYf`J`Yf`_Y\fghY]`bY\`a`Yf`ØVYf`XYb`l`a`[`Ub[`\a`]h`
9]bgUhnZU`fnYi`[`Yb`"ϕ`a`Y`f`YfYb`GhÀXhYb`Z]bXYb`XYfnY]h`
ϕZc`fa`Uh]cbg`_Ua`dU[`bYb`ghUhhž`i`a`XUg`6Yk`i`gghgY]b`ØVYf`X]Y`
f]WY`h][`Yb`J`Yf`\U`hYbgk`Y]gYb`]a`GhfU»`Ybj`Yf`_Y`f`ni`gW`ÀfZYb`"

8YhU]`g

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